

National Institute on Alcohol Abuse and Alcoholism

Alcohol and Health Monograph 3

Prevention, Intervention and Treatment: Concerns and Models



**U.S. DEPARTMENT OF HEALTH AND
HUMAN SERVICES**

Public Health Service

**Alcohol, Drug Abuse, and
Mental Health Administration**

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National Institute on Alcohol Abuse and Alcoholism
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Foreword

With the publication of the Alcohol and Health Monograph series, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) endeavors to present a current, comprehensive picture of the broad range of information available on alcoholism and alcohol abuse. The four monographs in the series illustrate the progress that has been made in recent years in all areas of alcohol-related activity.

The monograph on *Alcohol Consumption and Related Problems*, examines alcoholic beverage consumption and the nature of problems associated with consumption from various perspectives, including factors which may lead to alcohol-related problems.

Monograph No. 2, *Biomedical Processes and Consequences of Alcohol Use*, reviews current findings and developments in the field of alcohol-related research and describes the differential effects alcohol exerts on the major systems of the human body.

Monograph No. 3, *Prevention, Intervention and Treatment: Concerns and Models*, describes the three levels of response—primary, secondary, and tertiary—that have been developed to address problems resulting from alcohol use. This monograph reviews current approaches and strategies for prevention; presents the concept of and describes intervention activities; discusses treatment issues and methods; and enumerates currently available resources, as well as those evolving within the Federal, State, local and voluntary sectors to implement alcohol-related programs.

Monograph No. 4, *Special Population Issues*, provides a forum for examining the unique problems of special population groups whose need for alcoholism and alcohol abuse programs has been underserved. This monograph demonstrates that a base of scientific knowledge exists on prevalence, incidence and nature of alcohol-related problems of special population groups defined by sex, age, race and ethnicity.

The information contained in these documents represents the efforts of many experts and scientists in the field of alcoholism. We believe they will be of benefit and interest to the scientific and professional communities as well as the lay public.



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Chapter 1

Current Status of Research Demonstration Programs in the Primary Prevention of Alcohol Problems

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Abstract

This chapter selectively reviews contributions to the primary prevention of alcohol problems made by those research demonstration projects funded in the past few years by the NIAAA and by State alcohol and health agencies. The first section describes the research demonstration project and its use by the public health field for applying existing knowledge to the development of programs to deal with health problems. The second section describes the theoretical and political constraints on the application of the research demonstration project to alcohol problems in particular. This section concludes that alcohol-related projects which best fit the research demonstration approach are those which work with specific and concrete problems, rather than those with multiple objectives which are ambitious and general in scope.

The third section reviews the findings of specific research demonstration projects, which continue to grow in number and complexity as the public health field expands its work with alcohol problems. Demonstration projects in the early and middle 1970s primarily sought to raise awareness about alcohol problems, expecting that imparting knowledge would stimulate appropriate attitudes and choices about drinking. Aimed largely at individual youth, utilizing school settings, youth-serving organizations, and mass media, these early campaigns generally produced mixed and often disappointing observed results of perishable attitude change (if any), and nil or difficult-to-interpret behavior change. Later projects directed toward youth and at-risk individuals have emphasized multicomponent approaches that work more closely with educators and administrators at host sites, and add work directly with attitudes and behaviors to the informational components of earlier campaigns. These later projects also are beginning to utilize more sophisticated evaluation designs, though project evaluations still leave much to be desired. Most of these later projects are still operating; interim results indicated that long lead times of a year or more are required to begin implementation, and that the programs are popular with target audiences and host organizations.

The last few years also have seen an expansion in the scope of research demonstration projects to include environmental issues of alcohol regulation, availability, and social and institutional controls on drinking. Some of these projects are directed more at evaluation than at implementation, e.g., assessments of "natural experiments" such as a State's raising its minimum purchasing age. The number of such projects can be expected to increase in the coming years if the current trends in the alcohol field continue to give weight to environmental issues. At present, the contributions of these projects to new prevention programs have yet to be determined.

The final section concludes that alcohol and public health agencies are beginning to use research demonstration projects as a rational means for exploring the application of new and untried ideas to alcohol problems, moving beyond (but still including) the raising of awareness. Future projects are likely to take greater care with methodologies and evaluations as health agencies mature in their application of projects to the prevention of alcohol problems. As this maturation occurs, it is important, first, that political and financial support be maintained or increased for projects that may be promising programmatically, but less attractive politically and more demanding technically. Second, the research demonstration project provides an excellent means for enlisting a broad spectrum of agencies and organizations in the primary prevention of alcohol problems. Alcohol and public health agency sponsors must provide flexibility in funding, technical assistance, and state of the art information to encourage research demonstration projects in nonhealth agencies at all levels of government (especially agencies dealing with alcohol regulation and availability), in minority organizations, and in community groups.

Introduction

The public health movement's approach to alcohol problems is of relatively recent origin, dating from the early 1960s with the report of the Cooperative Commission on the Study of Alcoholism (Plaut 1967) and the formation of the National Center for Prevention and Control of Alcoholism within the National Institute of Mental Health in the 1960s. The Center was superseded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) in 1971. Research into the uses of alcohol by the general population and by subpopulations has discovered a wide range of drinking problems that do not fall within the rubric of alcoholism treatment, but that do have serious social and health consequences (Cahalan 1970; Cahalan and Room 1974; Cahalan et al. 1969; Straus and Bacon 1953). Simultaneously, public health mandates have moved to include problems of chronic and "lifestyle" diseases, promotion of wellness in addition to prevention of illness, and concern for the interactions between health status and social systems. This latter concern includes expansion of responsibilities to include problems of drugs and alcohol and requirements that health care delivery systems become more efficient and establish better ties with other institutions and the public in order to improve health status (Blum 1974).

With these developments has appeared a health-social orientation toward alcohol problems, greatly expanding the medical-personal orientations of the still-flourishing alcoholism movement. This new orientation has achieved public policy status, with substantial investments of resources at the Federal level and growing support among the States to establish public health agencies as the leading organizations in work on alcohol problems. With this achievement has come fresh interest in the establishment of alcohol problem prevention programs, as evidenced in the Alcohol, Drug Abuse, and Mental Health Administration's (ADAMHA) first annual conference on prevention in September 1979, the work of the President's Commission on Mental Health, and the recent publication of ADAMHA's draft policy for prevention program activities in the coming years, including among its recommendations requests for separate line-item budgets for prevention activities (Klerman 1980).

With the advent of public health agencies to handle alcohol problems has come the public health model of disease prevention as the basis for intervention strategies. This model assumes a host-agent-environment relationship through which diseases are transmitted and into which public health agencies, other authorities, and the general population can intervene to prevent illness or promote wellness. Intervention might occur in any or all of the three sectors of the model, at levels ranging from the individual to the societal, and at three points in the course of a disease process: primary intervention—reducing rates of the occurrence of cases of disease; secondary intervention—reducing the number of existing cases of disease; and tertiary intervention—reducing disease problems among existing cases. The model is based on strong faith in the capacities of scientific research and the scientific method to guide intervention efforts. The model assumes that disease entities or conditions promoting unhealthy states can be discovered through scientific research, that rational prevention programs can be established based upon these findings, and that these findings can be translated into public and corporate policy and into popular activity which in turn will result in health benefits.

The application of the public health model to alcohol problems has its critics. Epidemiological research, a variety of ethnographic studies, and studies to determine sentiment and perceptions regarding alcohol problems have repeatedly pointed to alcohol use cultural phenomena that are beyond the purview of the public health model, or at least complicate enormously its application to alcohol problems (Blane 1976; Chauncey 1980; Conrad and Schneider 1980; Room 1974, 1979b). Complexities in social definitions of prevention have led to the proposal of several prevention intervention models, not all of which fit neatly into the traditional public health model (Klerman 1980). Critics of the health establishment challenge the prospect of the hegemony of health agencies as the authorities for prevention of alcohol problems; they question whether the health field is appropriate for or capable of preventing alcohol problems that may be more social than medical in

nature (Beauchamp 1976; Conrad and Schneider 1980). Certainly, the public health model provides an array of opportunities for prevention activities which public health agencies have yet to explore fully, due partly to the newness of public health model orientations to primary prevention of alcohol problems, and partly to limitations of the public health agencies themselves.

A central resource in the public health approach to disease prevention/health promotion is the *research demonstration project*, a device for exploring interventions into health problems through the public health model. This paper explores the current application of the research demonstration project to the prevention of alcohol problems at the point of *primary prevention*. The paper reports on prevention projects currently under way, while looking to the boundaries of the public health model for possible expansion of projects' scope and activities.

The paper is organized into four sections. The first and second sections review briefly the nature of the research demonstration project and general constraints in its application to the prevention of alcohol problems. The third section contains a six-category framework for reporting on projects in agencies and organizations that are active or potential hosts for prevention efforts. The substantive discussion of current projects falls primarily into the first two of these six categories. The remaining four categories are included more to explore what might be done, since few projects currently are operating under these latter headings. As the research demonstration approach to primary prevention of alcohol problems grows in the coming years, future editions of this paper will likely contain more host-agency categories (e.g., work organizations), reports of more projects in each category, and more extended discussion of project findings.

The fourth section concludes that the research demonstration project has sound potential for exploring primary prevention issues in the alcohol field, as evidenced by the recent growth of a second generation of prevention projects that hold promise both for increasing knowledge about alcohol problems and for finding workable strategies for reduction of alcohol problems. Realization of this promise will require increased flexibility in funding, improvements in information flow and technical assistance (especially in evaluation), sustained political backing, and modest expectations for results from work on concrete problems.

The Concept of the Research Demonstration Prevention Project for Primary Prevention of Alcohol Problems

The idea of the research demonstration project for primary prevention of alcohol problems—or the alcohol prevention demonstration

project in more convenient wording—is expressed in a number of definitions of the purpose of such projects by sponsoring agencies:

The objective of the Alcohol Abuse Prevention Demonstration Grant Program is to support projects that test specific hypotheses about current and new approaches aimed at minimizing the occurrence of alcohol-related problems through means other than treatment or rehabilitation services. Since the aim of the grant program is to *test* methods, strategies and approaches, rather than provide direct prevention *services*, support for such services will be provided only in those cases where it is essential to the demonstration purposes. All proposed projects must include a clear hypothesis, a well designed methodology, and an effective evaluation plan. (NIAAA Prevention Demonstration Grant Guidelines, March 1979)

The Division's initial prevention efforts will be aimed at establishing the usefulness of prevention activities as an alternative to treatment for impacting on certain behavioral manifestations such as: drunken driving, child abuse and neglect, absences from school or work, vandalism, accidents; and other physical illnesses which accompany the abuse of alcohol. Since many communities define their problems with alcohol abuse in terms of societal costs, which can be measured, the prevention effort must initiate a system for carefully developing, evaluating, and validating a wide variety of program approaches so that within the next few years there will be evidence indicating which approaches reduce the alcohol abuse problems. (State of Illinois, Division of Alcoholism Prevention Initiative, final draft, July 17, 1979)

Prevention—Planned strategies designed to preclude or reduce use of drugs which have a negative impact on the individual, the family, and the larger society. Negative impact includes the physical, mental, or social consequences which result in the reduction of optimum function at home, in school, at work, or in the community. Research and experience have shown that an approach to prevention which promotes a positive influence on the individual is more likely to foster a life style which excludes substance abuse. . . . Prevention activities are targeted at the total population with emphasis on delivery of those services prior to the manifestation of inappropriate behaviors. Prevention activities can be delivered through schools, media, family and/or community agencies and groups. (State of Pennsylvania, Governor's Council on Drug and Alcohol Abuse, State Health Coordination Council Prevention Demonstration Grant Guidelines, Section 262.3(a)(3), August 23, 1979)

To prevent individuals from developing drinking behavior that is detrimental to their health, or causes of family, social or economic problems, or creates a financial burden upon the government. (Prevention Demonstration Program for Reducing Excessive Drinking in California, Office of Alcoholism, March 25, 1976)

A common thread links these various definitions. The alcohol prevention demonstration project is viewed as a device useful for bridging the gap between knowledge about alcohol problems, derived through research and experience in the delivery of services to various population groups. The demonstration project has a responsibility to report back to a community of researchers, policymakers, and the public its findings regarding the nature and resolution of alcohol problems. The prevention emphasis can be more upon research, or more upon service, but usually includes elements of both. The target of prevention efforts can be one or many population groups. The scale of effort can range from the individual to the community level. But whatever its orientation, the prevention demonstration project consists of a controlled effort to apply knowledge about alcohol problems to the prevention or reduction of people's problems with alcohol; the results of this effort are to be made available both for the purposes of increased knowledge about alcohol use and abuse and for the formulation of prevention policies and programs. The prevention demonstration project thus works at the junction between research and the development of policy for the delivery of services (Klerman 1980).

The prevention demonstration project thus contains tensions between ideas and events, between desired states and present conditions, between theory and reality; it is obligated to fill gaps between knowledge and service. This obligation is reflected in three related components of the demonstration project: planning, implementation, and evaluation. Evaluation has emerged in the public health model of prevention as particularly important to justifying and validating the demonstration project approach. However, as the following sections will show, evaluation components are presently the least developed elements of the prevention demonstration project, and their base in the traditions of scientific research poses difficulties both for sponsoring agencies and for the projects themselves.

Structure of the Alcohol Prevention Demonstration Project

Planning Component

This component includes development of the prevention concept, needs assessment to identify the salience of the concept for working with a target population, and clarification of the agency mission and mandate for undertaking prevention activities. These three planning component elements are difficult to identify sequentially; the planning phase of the prevention demonstration project frequently requires working back and forth between the elements to clarify basic purposes and desired outcomes of prevention activity. Planning for projects in which definition of purposes and selection of problems are a matter of competing perspectives and differing priorities is a subject not well covered in the alcohol literature per se. In the alcohol field itself, only a few publications are available on planning prevention demonstration

projects (e.g., National Center for Alcohol Education 1977). More extensive discussions of project planning are available in the city planning and public policy literature (Pressman and Wildavsky 1979; Webber and Rittel 1973; Wildavsky 1972) and in the health planning field (Blum 1974).

Those who plan prevention demonstration projects must be equally attentive to the areas of concept, needs assessment, and agency mandate in developing the purpose of the prevention effort. Overemphasis on theoretical and conceptual issues and underemphasis on needs assessment may result in undo-able or misdirected projects, no matter how attractive they are intellectually. Conversely, projects eager to provide prevention services may become muddled and diffused without a clear conceptual framework in which to analyze and re-center prevention activities in progress. An agency that undertakes prevention efforts without considering its own mandates and powers to influence alcohol problems may fall victim to unrealistic expectations and may fail to notice or respond to unexpected consequences of its activities.

Implementation Component

The implementation component is the heart of the prevention demonstration project. This component includes the specification of arrangements and the commitment of staff, funding, and approvals to the activities of the prevention demonstration project. Work in developing this component may appear schematically rather straightforward (see definitions above and National Center for Alcohol Education 1977). In fact, activity in the implementation phases of the prevention demonstration project is often the most arduous, being the most difficult to control in advance and having the most potential for unexpected turnings and complications. It is the area in which most questions await answers from the prevention demonstration effort. It is the area where the project staff often must be most creative and where innovation and deviation from the purposes of the project are most likely to occur. The implementation phase constitutes the primary research interest of the demonstration project: Can the project in fact proceed from its initial statement of purpose and formulation of alcohol-related problems to desired outcomes through the methods and arrangements that have been proposed?

Complexities in the implementation phase of the demonstration project vary according to the extent the project works directly with people—individuals, groups, and organizations. Alcohol prevention demonstration projects that utilize educational and training approaches must confront the complexities of human behavior both among the target groups and in the network of surrounding organizations and jurisdictions which lay claim to alcohol problems. Both personal and organizational skills are required in the implementation phases of the project, so much so that, in several NIAAA Prevention Division demonstration grants, reporting on project progress is as much directed

toward comment on the exercise of these skills as it is toward reporting on the meeting of scheduled objectives for prevention activities (Urban Rural Systems Associates 1980). Even for alcohol prevention projects that require less face-to-face contact, such as those recording the effects of "natural experiments" through impersonal evaluation instruments, problems of implementation still require developing appropriate data sources and making arrangements with agencies and organizations to participate in evaluation activities (Douglass et al. 1979; Wittman 1980).

Elements of the implementation component include methodology, staffing patterns, budgeting, intra-agency and interagency agreements, and local organizing activities, all designed and assembled under the rubric of the project's purpose and desired outcomes. Few sponsoring agency guidelines exist to force a particular design or arrangement of these elements for the demonstration project, other than requirements for the designation of a project director who will be responsible for the work of the project. The absence of firm requirements in these areas underscores the importance of creative effort in the implementation phase of the demonstration project, particularly since funding agencies impose time and budget limitations.

Allowance of a relatively free field of action within the implementation phase includes the question of alteration of project operations while the project is under way. A strict research model for the demonstration discourages innovation, requires that operations be foreseen as completely as possible, and insists that methodologies be followed with an absolute minimum of variation. The "real world" and service-oriented nature of prevention demonstration programs in the alcohol field require firm statements of purpose and carefully delineated expectations for outcomes, but with allowance for some variation in methods and operations. The emphasis in the more productive projects remains upon implementation and hypothesis testing, rather than upon hypothesis making or problem finding.

Evaluation Component

Evaluation of the prevention demonstration project has its roots in hypothesis-testing procedures of formal scientific research. These procedures provide an ideal and a policy prescription for evaluation of public health agencies' funding of prevention demonstrations:

The evaluation design should include the following elements: the hypothesis to be tested; a sampling plan; a description of the control/comparison groups; the dependent, independent, and confounding variables to be studied; the specific measurement instruments to be used to test the impact of the project; a description of the data-reduction/analysis techniques to be used to test the project's hypothesis. The proposal should indicate how the evaluation results will be integrated in [the activities of] the prevention project. (NIAAA

Alcohol Abuse Prevention Demonstration Grants Program
Announcements and Guidelines, March 1979, p. 5)

This ideal is extremely difficult to live up to in practice due to the highly interactive, "real world" nature of the prevention demonstration project. Difficulties range from the development of the purpose of evaluation to the application of evaluation protocols.

Whose purpose does evaluation serve? The sponsoring agencies, project staff, other sectors of the alcohol field, surrounding public and private institutions and organizations all have needs to interpret project efforts for their own purposes. These needs carry with them, explicitly and implicitly, differing evaluation criteria and protocols. The project staff's needs for evaluation, for example, are likely to be formative and confirmatory in nature while the sponsoring agency's interest may be more in outcomes, feasibilities, and efficiencies. The competing and conflicting interests of neighboring organizations may lead the project staff to an interest in maintaining a low profile or selective reporting of results.

What are the purposes of demonstration projects? Tensions between purposes of new knowledge and purposes of provision of services lead to contradictory orientations toward evaluation. Partly the tensions are a matter of interpretation—is the glass half-empty or half-full? But more fundamental are issues concerning the extent of inquiry: Should one ask, What is the project up to, and how can the project place more emphasis on doing better what it is already doing? Or should one ask, What effect is the project having, and should it be more vigorously investigating the consequences of its efforts and searching for new questions? The former question places more emphasis on process evaluation and reporting of activities; the latter places more attention on outcome and impact. Increasing attention is being given to evaluation responses to both sets of questions (French et al. 1979; Wallack 1980a; Weiss 1972; Weiss and Rein 1972).

Projects generally benefit from having a sympathetic evaluator early on to ask hard questions about the definition of purposes, the practicality of means, and the kind and quality of measurements desirable for assessing the project's process and its outcomes. The demonstration project also benefits substantially from evaluation feedback during the course of the project's activities. NIAAA-funded projects have dropped unproductive secondary teacher training activities (Educational Service District Note 1); have revised staffing assignments to improve project efficiency and staff morale (California Women's Commission on Alcoholism Note 2); have dropped less effective project sites and devoted more resources to the more productive sites (Social Advocates for Youth Note 3); and have defined more clearly and focused more precisely on the target groups of prevention efforts (University of Pittsburgh Note 4; CASPAR Note 5). Conversely, those projects that have not utilized evaluation feedback for assessing project activities have tended to founder.

Technical issues in demonstration project evaluation pose serious difficulties for the application of formal experimental research designs involving control groups. Formal research designs require firm specifications of objectives, treatments, and results. But the more ambitious and active the prevention project, and the longer its duration, the more likely it is to encounter difficulties in finding, setting, and maintaining controls for the project's activities. Further, as the discussion in the section on *Implementation* suggested, much of the value of the prevention demonstration project lies in its responsiveness to unexpected events and conditions that come to light in the course of the project's activities.

The resolution of the problems of maintaining technical standards in evaluation has moved toward providing increasingly sophisticated techniques and technical assistance to research demonstration projects, in both quantitative and qualitative dimensions of evaluation. The National Institute on Drug Abuse (NIDA), for example, is developing an evaluation handbook that includes a variety of techniques to aid projects in establishing evaluation designs and to increase the information available from project efforts. Because the handbook project has met with a sufficiently enthusiastic reception among prevention projects in the field, in 1981 the NIAAA Prevention Division will cosponsor the handbook's continued development and dissemination to operating projects (French et al. 1979). The principle is to take projects as one finds them and to provide the best evaluation design possible, within each project's limitations. Some demonstration projects themselves have developed new aids to evaluation. For example, the CASPAR program project has developed the "CDPRG" pseudonym technique that allows tracking of individuals participating in projects. This technique provides a significant increase in protection of confidentiality to the point that administrators of institutions responsible for the protection of project participants' confidentiality now will consent to the use of the technique whereas before they might not (Carifio et al. 1978). Wallack (1980a) proposed the use of triangulation of research methods, using a variety of observational, survey, interview, and document review techniques at individual, group, community, and ecosystem levels to trace the demonstration project's progress.

At the individual project level, alcohol prevention demonstration projects are becoming more sophisticated in their evaluation efforts. Projects coming through the NIAAA Prevention Division have improved their evaluation plans during the past 8 years, moving from minimal evaluation designs emphasizing only project activities to much more complete and informative designs emphasizing analysis and outcome measures (e.g., California Women's Commission on Alcoholism Note 2). Sponsoring agencies are increasing their efforts to provide technical assistance in evaluation to funded projects. NIDA's Pyramid Project is one example. The NIAAA Prevention Division's plans to develop a technical consultation resource center are another. As Maloney (1980) indicated, public health agencies such as NIAAA are aware of the evaluation problems in prevention demonstration projects that have

long been noted by researchers such as Braucht et al. (1973), Goodstadt (1976), Room (1977a), Schaps et al. (1978), Staulcup et al. (1979), and Wallack (1980a). Efforts by public funding agencies to improve evaluation are taking place at both the Federal and State levels (e.g., Pennsylvania, Wisconsin, Illinois, California) in the forms of increasing standards, higher budgets, and technical assistance.

The concept of the public health model prevention demonstration project requires refinement for its application to problems of alcohol. Planning poses "wicked problems" (Webber and Rittel 1973) for the establishment of prevention project aims, requiring special attention to the forging of agreements and supports necessary to implement the project. Implementation requires initiative, creativity, responsiveness, and conceptual and political adeptness—i.e., strong leadership and organizational capacities in the project director. Evaluation, while a necessity for the project's operational development and for reporting back results, carries with it knotty technical problems in the application of scientific research standards to the real world project environment. One might reasonably expect that the health field, still early in the development of alcohol-related prevention demonstration projects, will show substantial improvement in the design of such projects in the future.

Constraints on the Application of the Prevention Demonstration Project to Alcohol Problems

Policy Issues

Prevention demonstration projects in their current form operate on a rather short tether. This is partly by intent: Projects generally are not to be continued or expanded except for evaluative purposes. But also this is partly an artifact of regulation by the sponsoring agency. Projects are limited in time, usually to 1 to 3 years of time for funding commitments. Projects are limited by levels of funding, usually ranging from a few thousand to a few tens of thousands of dollars at the local and State levels, and to a few hundred thousand dollars a year at the Federal level.

These constraints reflect health agency priorities toward prevention projects generally, compared with the use of overall agency budgets for all activities within the agency mandate. Staulcup et al. (1979) indicated that in 1978 only about \$2.5 million—less than 1 percent of the Federal Government's budget for alcoholism treatment services, training, and research—went to NIAAA prevention demonstration projects. Within this narrow funding base, the NIAAA Prevention Division still is obliged to spread its prevention project dollars across the country, and so must adopt an uneasy compromise between intensity and breadth of efforts, and numbers of projects. State public health agencies are in a similar position.

These constraints reflect caution in the conduct of a prevention demonstration program. It has been necessary to develop a first generation, i.e., a trial effort to learn what it takes to establish a viable prevention demonstration grant program. Funding and time levels are set somewhat arbitrarily at the outset, in the hope that adjustments can be made as experience in the amount of necessary support is gained and as the agency is able to calculate costs and build a constituency for increased levels of support. Because of the relative recency of the research demonstration project approach as policy, agencies at the Federal level (NIDA, NIAAA) are just now going into the second generation of projects, and adjustments in levels of operating support are just now being reviewed (Klerman 1980). State agencies are still in the first generation of such projects.

A second source of prevention policy limitation lies in programmatic biases of sponsoring agencies and projects. Health and social agencies are interested primarily in social and health-related matters emphasizing the health status of the individual and of identifiable subpopulations, particularly the at-risk, the dependent, and the disenfranchised. The emphasis on prevention programming, therefore, tends to be weighted heavily toward intervention in the "host" sector of the public health prevention model (Maloney 1980). This occurs through sponsoring agency bias (see the definitions of prevention in the first section of this paper), but not exclusively or necessarily so. Members of the demonstration grant review committee for the NIAAA Prevention Division, representing a cross section of disciplines and interests in alcohol problem prevention, have lamented the absence of conceptually and programmatically diverse applications from nonhealth agencies (Room 1977*b*). It appears that a heavy emphasis on prevention projects oriented toward the individual is a matter of bias in the health field as a whole, not just in the sponsoring agency. The bias is disciplinary and professional as well as organizational, even though the broad conceptual framework of the public health prevention model allows wide latitude in choice of entry point.

A third source of prevention policy limitation lies in political agendas and in the mandates of sponsoring agencies. Prevention demonstration projects, because they can achieve high visibility for action on politically prominent problems at relatively low cost without damaging the status quo (Room 1977*a*), can be in the tradition of a "symbolic crusade" to respond to challenges to prevailing norms, rather than to work substantively on the reduction of particular problem clusters (Gusfield 1963, 1975). Politically driven prevention agendas can be a matter of externally imposed requirements for orientations toward prevention, as occurred for drug prevention activities in the early 1970s. Or they can be a matter of agency growth and survival, to build a popular mandate for prevention activities, as Chauncey (1980) claimed for the NIAAA's strong emphasis on prevention of alcohol abuse among youth.

Theoretical Issues

Searches for the causes of alcohol problems are beset by the presence of many competing theories. Two major lines of alcohol research have implications for current alcohol prevention demonstration projects. These are the "sociocultural approach" and the "distribution of consumption" model (Blane 1976; Frankel and Whitehead 1979; Harford et al. 1980). The sociocultural approach emphasizes the relationship between alcohol problems and the normative patterns of alcohol use within a society. Problems of alcohol are considered likely to occur when the norms are conflicting. Problematic conflicts are viewed as personal ambivalence and anxiety around drinking that lead to alcohol abuse; juxtaposition of drinking events and social situations that generate social conflict and problematic consequences (Room 1977a; or as norms which in themselves encourage excessive and problem drinking. "Norms" can be interpreted through interactions between informal social controls and more formal regulations (Gusfield 1975). In the sociocultural approach alcohol problems may be viewed at levels ranging from the individual to the community (Cahalan and Room 1974) to the national and international (Frankel and Whitehead 1979). Alcohol problems may be seen as difficulties in their own right—the properties of alcohol combined with the sociocultural milieu generate alcohol problems. Or alcohol problems may be seen as one set of problems in a cluster of other problems that occur in the individual's relationship to immediate and more-distant social structures (Jessor and Jessor 1980). Implications for prevention projects are as many and as varied as the many turns of theory.

The distribution of consumption model, in contrast to the sociocultural model, takes a more single-minded view of the relationship between alcohol consumption rates in a society and the occurrence of alcohol problems. Based on the pioneering research of Ledermann (Harford et al. 1980), researchers have for the past 20 years been exploring at national and international levels the relationship between cirrhosis rates and consumption rates. The findings have arguably demonstrated that the higher the per capita consumption rate, the greater the number of heavy drinkers prone to medical complications in general and to cirrhosis in particular. Alcohol researchers such as Schmidt and Popham (1978), and indirectly, Beauchamp (1976), have argued that the relationship is clear enough to constitute an actionable public health problem that calls for prevention measures aimed at reducing per capita levels of consumption, particularly by restricting alcohol availability. The impact of restrictions on availability is becoming a major focus of research. Restrictions in retail outlet distribution, increases in price, imposition of conditions of sale, and limitations on alcohol production all have been explored, though so far without substantial consequences for the establishment of prevention initiatives (Bruun et al. 1975; *Medicine in the Public Interest* 1979).

The relationship between the sociocultural and the distribution of consumption models remains unclear, though attempts are under way to make the two sets of theory compatible (Edwards 1980; Frankel and Whitehead 1979). The alcohol problems field has grown so complex that fresh assessments are under way to try to make sense of the variety of theories and findings for purposes of establishing better prevention policy (National Academy of Sciences in press). Despite these efforts, powerful explanations of the causes of alcohol problems have yet to be found that are widely accepted and clear as to their implications for prevention efforts.

The Problem-Specific Approach

Political and theoretical issues have led alcohol researchers to investigate pragmatic orientations toward the development of prevention interventions. With regard to the political issues, both Seeley (1980) and Room (1980) recommended acknowledging that prevention activities are essentially political in nature and noted that alcohol problems are interdependent complexes, intervention into which may yield mixed blessings:

. . . It is quite possible to do something that will get the society to be more relaxed about drinking so that behaviors aren't defined as problems any more and there's less social pressure around drinking more—and end up with more cirrhosis. So you have your choice of problems, to some extent, according to the preventive strategies you adopt. It makes life very complicated, but it seems to be that the fundamental point is that alcohol problems prevention is explicitly political, and that you are not talking about a single problem when you talk about trying to prevent overuse of alcohol. (Room 1980, p. 62)

Taking this view implies a rather widespread debate among various public and nonhealth agencies, as well as health agencies, over which problems to approach and in what ways. Room (1977a,b, 1979a) has explored the conceptual basis for pursuing a problem-specific approach to dealing with problems of alcohol. Major problem categories are identified empirically and eclectically, based on observation and on the results of epidemiological and other research into patterns of drinking by various groups and the problems that these patterns entail. Six major problem domains are identified: (1) problems of chronic illness; (2) acute health problems; (3) problems of demeanor while or after drinking; (4) casualties—injuries, death, and property loss (Aarens et al. 1977); (5) problems of the default of major social roles; and (6) mental or existential problems (Room 1977a).

Approaches to dealing with the problems and strategies for intervention are to be based on the best knowledge available, drawn both from research and from experience, and upon criteria that address the interests of the polity, of which the health agency is one, but not the exclusive arbiter. Some preliminary suggestions for choice of targets

include the severity of the problem; the extent of it (the numbers involved or the frequency of occurrence); trends in occurrence (are the problems increasing); the centrality and determinancy of alcohol's involvement in the problem; impacts on others besides the drinker; the effectiveness of potential prevention strategies; and ethical factors in potential preventive strategies (Room 1977a).

Within this approach is the pragmatic injunction that the project be as specific as possible about what is to be prevented, and that the specificity be manageable within the context of the project. Such an injunction does not solve the problem of policy bias or political consequences, nor does it provide knowledge and theory where neither exists. It does focus, however, upon specific and realistic activities that are possible within the purview of the demonstration approach. And it is valuable for directing attention to use of the prevention demonstration model for its potential strengths in exploring lines of action in the implementation phases, while minimizing unrealistic or unjustified claims that might be made for knowledge and for service.

Current Alcohol Prevention Demonstration Projects

This section discusses the experiences and findings of selected alcohol prevention demonstration projects recently completed or currently under way. The projects chosen are those for which evaluations exist that are of sufficient depth to allow an analysis of the projects' processes and their outcomes, or, for those projects currently operating, their expected outcomes. The following discussion relies heavily but not exclusively on 38 original projects funded by the NIAAA Prevention Division. These projects were available for analysis, contain at least some emphasis upon evaluation, and are accessible to the field.

The organization of this section is by type of organization or agency that is host for the prevention demonstration effort. The prevention demonstrations best organize themselves by concept, target audience, and methodology when considered this way. The section has six headings: education and service organizations for youth; mass media and communications organizations; alcohol control agencies; nonalcohol regulatory agencies; voluntary and community organizations; and replication demonstration projects. Because the activities of some prevention demonstration projects take place across several host settings, these projects will be mentioned several times. Additionally, the agency or organization primarily responsible for conducting the prevention project—i.e., the one that has been funded to do the work—is not necessarily the same as the host organization. For example, the CASPAR project is the primary responsibility of an alcoholic rehabilitation unit in a mental health-mental retardation agency; the project's host agency is principally the local school system.

Projects for Youth in Educational and Service Organizations

Orientations of alcohol demonstration projects working in these sites are drawn from sociocultural theories of alcohol use and abuse. The general aim of these projects is to promote "responsible drinking," both as an end in itself and to reduce problems of alcohol use and abuse. The target of the efforts is the individual, defined most often as a member of the general population for which the host institution has responsibility. Projects rely upon knowledge-attitude-behavior models of change for their intervention efforts [see Wallack (1980a) and Goodstadt (1976) for reviews of knowledge-attitude-behavior models of change].

Alcohol prevention demonstration projects directed at youth are under way in primary and secondary public schools; in private schools, colleges, and universities; in youth organizations such as the Boys' Clubs of America and the YMCA; and in treatment organizations that have youth service components. The projects are prevalent and popular with sponsoring agencies. Thirty-seven of 46 prevention demonstration projects funded by the NIAAA have or have had youth prevention projects based either solely or primarily in these sites. Demonstration projects at the State level have emphasized siting of projects in organizations whose primary responsibilities are to work with youth. Illinois, for example, recently selected 23 youth-serving organizations as project sites to be included in its 34 State-funded alcohol problem prevention demonstration projects (Illinois Department of Mental Health and Developmental Disabilities Note 6). Public schools in particular have long been popular as sites for evaluated youth-oriented prevention demonstration efforts, their use extending from the 1960s (Williams et al. 1968).

The Demise of Information-Only Approaches and the Rise of Multicomponent Projects

The history of drug and alcohol prevention projects particularly in public primary and secondary schools has provided experience that has led to a new generation of youth-oriented, education-based prevention demonstration projects. The early campaigns emphasized information-only approaches concerned with the nature, effects, and consequences of alcohol use and abuse. The premise, drawn from the traditions of public health education, was that if young people knew the dangers of use and abuse, they would develop rational attitudes and appropriate behavior that would prevent problems. Information-only campaigns of the late 1960s and early 1970s based on these premises have been largely discredited for having any effect on alcohol-related problem behavior or level of consumption. Some early drug education campaigns in fact seemed to provide information that increased experimentation and use of drugs, rather than the opposite (Stuart 1974). The impact of information-only campaigns on knowledge and attitudes has

been more in the desired direction, but here too results, while mildly positive, have been generally disappointing (Goodstadt 1976; Schaps et al. 1978).

These early findings have had consequences for the development of current demonstration projects. The knowledge-attitude-behavior model of change has been called into question. Still the basis for the youth-oriented programs, this model has been elaborated into multicomponent complex projects to continue working with youth through educational/service organizations. Three developments in education-based prevention approaches to youth have occurred: more attention has been given to the content of alcohol education curriculums; increased emphasis has been placed on the participation of the target population in the activities of the prevention project; and increased experimentation has been done with the development of specialized settings for alcohol-related education/service efforts.

These developments stem from elaboration of the original educational premise in the face of findings that information-only approaches did not seem to "take." More emphasis has been placed on working with attitudes, in particular, to bridge gaps between increases in knowledge, which some projects can demonstrate at least over the short run, and desired changes in behavior.

Attention to Alcohol Content in Curriculums

By the mid-1970s, complaints had ceased that alcohol teaching materials were not available. Concern shifted to the quality of the materials, particularly with regard to their acceptability and comprehensibility by the target audience, and to the place of the curriculum within the activities of the host institution. Two NIAAA projects in particular exemplify developments in curriculum development. Educational Service District (ESD) No. 121 in Seattle, Wash. (Note 1), undertook *de novo* the task of designing an alcohol education curriculum for classroom use in grades K-12. The curriculum combines information about alcohol with educational theory to provide increasing increments of exposure to alcohol-related material by grade, combining both cognitive and affective elements at each level, as appropriate to the age developmental stage of the student. The curriculum product, called "Here's Looking at You," is available in the form of kits with visual and handout material for selected grade levels. It is designed to assist classroom teachers with curriculum presentation and to attract the interest and participation of the students. The Cambridge and Somerville Program for Alcoholism Rehabilitation (CASPAR), in Somerville, Mass. (Note 5), has also developed an extensive curriculum that includes both informational and affective components. The CASPAR program places less emphasis on a tangible curriculum document and more emphasis on 20-hour and 40-hour units of teacher training and the training of youthful peer leaders for transmission of the curriculum material. In both the CASPAR and the ESD approaches, regular

classroom teachers have assisted from the earliest stages of curriculum development in designing and testing the curriculum material. Students first exposed to the material also have provided evaluations which have been used in subsequent curriculum refinement.

The curriculum materials in CASPAR, ESD, and similar projects identify the physiological and psychological effects of alcohol, explore beliefs about alcohol's use, look at prevailing patterns of use, and emphasize the importance of responsible decisionmaking about the use of alcohol. The materials also include discussion of harmful personal and social effects. In teaching "responsible drinking" the material acknowledges that youths do drink and is careful to avoid a proscriptive orientation. The material is only vaguely prescriptive in that it discusses, but avoids quantifying, "how much is enough." The emphasis is upon leading students to optimize consumption levels and drinking behavior for themselves, recognizing that some students may choose not to drink at all and others may choose to drink moderately. Teaching material about "alcohol abuse" involves examples of abusive drinking and its consequences and allows room for exercises on proper decisionmaking.

Participation of Host Organization and Target Audience

Alcohol education curriculums have been redesigned both to provide material that is comprehensible and appropriate and to provide opportunities for interaction between instructor and audience. Approaches to attitude improvement place faith in work through discussions and exercises in training for affective, interpersonal, and social skills. Participants are expected to become personally as well as intellectually involved in the project through such activities as interpersonal skills training, self-awareness exercises, assertiveness training, and role-playing exercises to explore the management of oneself and others in alcohol-related situations.

Several NIAAA-funded demonstration projects have reported the active, eager, voluntary enlistment of members of the host organization (teachers, officials, administrators, families, and youth) into project participation. Unfortunately, little is available in the way of formal reports and assessments of this participation (National Institute on Alcohol Abuse and Alcoholism, n.d.; CASPAR Note 5). Generally, the efforts to engage the students and staff of the host site have been considered a success by the directors of these projects and by others who have observed the projects' operation (notably the administrators of school sites); and these efforts are claimed to be the basis for findings of improved attitudes toward alcohol use and abuse.

Three factors in particular seem to stand out in the projects' ability to obtain active involvement. First, project staff work hard with school administrators, teachers, and youth in planning the curriculum and the activities of the project, generally working a year in advance of implementation. Second, staff develop a base for contact with students,

including the use of "peer counselors" to assist with instruction and other project activities and to serve as role models (University of Pittsburgh Note 4; CASPAR Note 5; Boys' Harbor Note 7; Boys' Clubs of America Note 8). Third, the project staff's own use of interpersonal skills is essential to training and consulting with teachers and peer leaders. The Boys' Harbor, CASPAR, and ESD projects have found that their training and consultation activities for teachers and peer counselors are essential first steps for working with youth. Teachers and counselors must be compensated if they are to serve effectively or for any length of time. Compensation for teachers includes cash payments, merit increase credits for raises in salary, and/or release time from other teaching duties. Compensation for the peer counselors and peer leaders usually is in the form of cash payments.

Experimentation with Settings for Alcohol Education

As the projects have increased their sophistication in attitude-oriented education components, increases in the kinds and numbers of project activities have followed. Projects have become multicomponent affairs. The University of Pittsburgh "MAP" Project includes basic mandatory classroom instruction in health classes; an elective year-long special alcohol education course, including affective components; a series of small group sessions for at-risk students; up to six sessions of individual counseling; a peer leader training component; a drop-in center; and a youth club. The University of Massachusetts Demonstration Alcohol Education Project (Note 9) includes, in addition to the MAP components, a media campaign (print materials and a radio show), redesign of the campus "pub" in the student union, contact with the student health service and campus police, and an advisory group to recommend policy changes regarding alcohol to the university administration. In addition to its school-based activities, CASPAR has a club for social activities, treatment services for students who want help with alcohol problems, and periodic "community workshops" involving parents and general audiences. Other NIAAA education projects have fewer components, but all have at least several.

The multicomponent approach allows experimentation with personal skills training in a variety of settings that are relatively protected from extraneous interference. These settings allow programing aimed directly at behavioral change in addition to concentrated work with knowledge and attitudes. Small group sessions are most prevalent, both in and out of school, followed by social activities clubs and retreats which simultaneously provide alternatives to drinking and opportunities for staff and peer leaders and participants to practice personal skills with program participants. The interest in finding appropriate settings extends at the college level to work with student dorms and with residence hall supervisors, particularly in finding ways of eliminating abusive uses and diluting alcohol's prominence in dorm social activities (University of Massachusetts Note 9).

One of the original purposes in the development of such settings was to provide an opportunity for the project staff to work with youth who had serious alcohol or other personal problems (University of Pittsburgh Note 4; CASPAR Note 5). A second purpose was to allow projects to work with young people outside of normally hostile environments (Boys' Harbor Note 7; Partners Note 10). As the projects have developed, they have served these purposes. Further, they have demonstrated additional value for prevention activities for less troubled youth seeking better uses of time and a more attractive social life. The projects' use of specialized settings and activities has not expanded to this point, but the settings' potential for positive programming for relatively problem-free individuals has been noted by several projects (e.g., the University of Massachusetts project and the University of Pittsburgh's interest in the "system effects" of its project on the general patterns of alcohol use and abuse among the general student body). One Philadelphia project (not funded by NIAAA) aimed at young adults is experimenting with a new kind of social club with deliberate social controls, planned social activities, and emphasis on moderate drinking to replace the typical milieu of "single bars" (Thomas 1969). The alcohol prevention project's potential use of specialized settings aimed at young people is perhaps an ironic contrast to some drug prevention projects that have for some time been exploring alternative activities in customary community settings. Use of special settings for exploring the use of the legal drug alcohol follows an opposite tack to learning the use of customary settings to encourage disuse of illegal drugs in dangerous settings.

Evaluation Findings

Discussion of the results of recent prevention demonstration projects directed at youth through educational organizations is complicated by the absence of evaluation reports, by complexities in the projects' purposes and objectives, and by shortcomings in the knowledge-attitude-behavior model of individual change.

The projects referenced above (except for CASPAR which has provided an extensive final report on its efforts) are still operating or are in the process of wrapping up and preparing their final reports under NIAAA funding. Evaluations are therefore generally restricted to preliminary and interim findings. Additionally, for only a few projects has a usable stable evaluation design been completed and administered to gather extensive baseline information prior to the start of the project (CASPAR, Partners, University of Pittsburgh).

Project proposals to promote "responsible drinking" and to "reduce alcohol problems" generally have not been elaborated into firm objectives that allow ready measurement of behavioral outcomes to determine whether the purposes have been achieved by the projects' activities. An increase in "responsible drinking" might be interpreted from an increase or a decrease in referrals for treatment, a reduction or an increase in self-reports or agency reports of drinking problems, either

a decrease or an increase in absolute consumption, and in shifts of drinking patterns without any change in level of consumption. Similarly, a "reduction of alcohol problems" might be obtained substantively, with or without a decline in reported consumption levels and patterns; or it might occur as a result of changes in the respondents' definition of problems following the work of the project. The projects' broad sketching of objectives has not been accompanied by delineations of expectations for impact of project efforts on attitude-behavior relationships. Accordingly, evaluation research becomes more like original research, trying to trace out the meanings of changes in drinking behavior and consequences that may be observed to follow the projects' treatments.

The difficulties with specification of objectives that can be readily evaluated are traceable in large part to difficulties with the knowledge-attitudes-behavior model for individual change. These difficulties are reviewed by Wallack (1980a) and need only be summarized here. Briefly, the theory provides no guarantees that changes in attitude will result in changes in behavior; substantial research has found that changes are more likely to flow in the opposite direction (Goodstadt 1974; McGuire 1974). Moreover, the approaches of communication and psychological theories to change are not the same as those of educational theories of training and development. The former emphasize modifications of attitude-behavior relationships following exposure to an external stimulus to be internalized over a short term, with a relatively diluted exposure. The latter emphasize theories of growth and development from early age through adolescence, presuming long-term and supervised practice at both cognitive and behavioral levels to internalize the material being presented.

The two approaches have not been fully reconciled in these projects, except perhaps in the ESD and CASPAR projects. Both of these projects are careful not to make many claims for dramatic behavior change, preferring to consider this more as a matter of difficult-to-predict personal development rather than a matter of aggregated response to the effects of the program. The attempt of these projects is to provide students with tools for development of personal approaches to alcohol use, rather than to achieve a mass effect regarding changes in drinking patterns and related behavior. Both CASPAR and ESD are opposed to the notion that their educational approaches are a "quick fix" for social and behavioral problems of alcohol.

The idea of multicomponent education generally meets with a positive reception and is considered by host-site administrators and young people to fill unmet needs. At the college and university levels, for example, the NIAAA's "50+12" program to stimulate the development of alcohol prevention demonstration projects on campuses throughout the United States has met with substantial success in attracting new program starts. Of 62 campuses contacted by the NIAAA in 1974-75, 34 expressed interest in such programs and 23 had developed or were in the process of developing campus programs

about a year later (Hewitt 1977). The project's planning and ideas handbook, *Whole College Catalog About Drinking* (National Institute on Alcohol Abuse and Alcoholism 1977), is now in its second edition, with 30,000 copies in print, and is continually requested by schools and youth-serving organizations.

Projects often report a substantial increase in knowledge and attitude improvement in the short run. CASPAR notes that these improvements, while they decay somewhat over time, are still visible 3 years after treatment. Both the University of Pittsburgh and CASPAR have found that attitude change depends to some extent upon whether the young person already had formed an attitude toward the use of alcohol. Those students without attitudes or whose attitudes are conflicted and contradictory are more amenable to change in desired directions than those who already have well-formed beliefs about drinking. The younger the student, the more amenable to attitude change he or she is. CASPAR, Boys' Harbor, and Michigan's (1977) statewide Substance Abuse Prevention Education Program have found it desirable to refocus efforts to working with younger students (fourth, fifth, and sixth grades) to obtain more pronounced positive changes in attitude. These findings confirm the research of Jahoda and Crammond (1972), who found among Scottish schoolchildren a change "from predominantly open acceptance of alcohol at age 6 to somewhat furtive and ambivalent negative attitudes at age 10" (p. 42), and who suggested that alcohol education might best be directed toward students in the upper primary grades. The University of Pittsburgh (Note 4) has found that attitude improvement takes the form of retardation of increases in positive views toward drinking (attractions to drinking), rather than of increases in negative views (repulsions to drinking).

Changes in drinking behavior are complex and difficult to interpret; they often go in both desired and undesired directions. For example, the University of Pittsburgh reported (after one full year of program operation) that students at the test high school showed decreases in quantity and frequency of drinking compared with controls at four other schools. However, students at the test site showed a comparatively greater increase in drinking in unsupervised settings. At-risk students in small groups at the test site showed only half the increase in drinking reported for similar students at the test site who were untreated; but treated boys got drunk more times than untreated boys, while treated girls got drunk fewer times than untreated girls. CASPAR, ESD, Boys' Harbor, and the University of Massachusetts reported similar complexities in findings of drinking behavior.

Generally, the projects' quantitative evaluations suffer from absence of standard instruments for reporting drinking behavior, from absence of validity and reliability testing, and from difficulties in making newly developed instruments compatible with each other and with standardized instruments. CASPAR, Partners, and the University of Pittsburgh projects—the only NIAAA-funded projects with prior experience in developing quantitative evaluations specifically for their projects—all

have these difficulties with their evaluation instruments. The evaluations of most early projects are so seriously flawed technically that they are of dubious value for analyzing results. Most later projects' evaluations of program effects on drinking behavior are either sketchy or not yet available.

Use of schools as sites for alcohol prevention demonstration projects, a source of some controversy several years ago (Blane 1976; Jahoda and Crammond 1972), does not seem to pose difficulties for enlisting administrative support, and teachers as educators about alcohol problems appear to have credibility with students, provided the extensive planning and teacher training activities alluded to above are undertaken by the project staff. The projects reported above appear to be popular with students and have been able to penetrate school systems where other drug and alcohol prevention projects have failed (e.g., Boys' Harbor). Alcohol curriculums are being taught without difficulty whether they are integrated into other courses or taught as freestanding subjects.

The projects in some cases have value as secondary prevention programs for young people with personal and family alcohol-related problems. CASPAR notes that, in its first 18 months, 55 students were referred for treatment from the school system as a result of program activities; about half of them were self-referrals (CASPAR Note 5). The University of Pittsburgh has had no difficulty filling its small groups for at-risk students (those with school problems or high-stress family situations), and its counseling services are well used. Where the alcohol demonstration projects have begun at a general level, directing efforts toward reaching *all* students, those students with alcohol-related problems have come forward voluntarily or have been more readily referred by educators or disciplinary authorities (CASPAR Note 5; University of Massachusetts Note 9). However, several alcohol demonstration projects that are organized principally around finding and working with high-risk young people, in both school and community settings, have had a difficult time showing positive results in attracting high-risk individuals into the program (Committee for Economic Progress Note 11; Institute for Scientific Analysis Note 12).

The projects thus far have focused on training/education for individual students and teachers, rather than upon the policies, practices, and procedures of the organizations serving the individuals. Two exceptions are the University of Massachusetts project and the University of Pittsburgh project's evaluation interest in "system effects"—general shifts in policies and attitudes toward alcohol that might occur as a result of the project's efforts. Project impact on the organization's regulations and enforcement patterns regarding alcohol is unknown at this time. However, several of the projects are being continued by local sponsoring agencies after NIAAA funding runs out (ESD Note 1; University of Pittsburgh Note 4; CASPAR Note 5).

Do the more recent youth-oriented alcohol prevention demonstration projects in educational organizations hold promise for overcoming the

negative evaluations of earlier years? Despite improvements in the projects' popularity and in the increases of participation by young people in them, their impact upon alcohol-related problems remains obscure. It is not clear what changes in attitudes toward alcohol use imply for changes in alcohol-related behavior. Those projects that work with younger children in the upper primary grades may produce more changes in attitudes than projects for older youth. Perhaps these attitude changes will be followed by observable behavior consequences. For older youth—teenagers and college students whose attitudes already are relatively well formed—behavior change may come from project activities emphasizing behavior directly rather than from work only with attitudes, especially through use of specialized settings (e.g., social activity clubs). In any case, more attention should be paid to the design of evaluation instruments, methods, and their application, if we are to learn more about alcohol problem prevention from the next generation of prevention demonstration projects in educational settings.

Mass Media and Communications Organizations

Use of mass media for alcohol problem prevention demonstration projects is occurring through public information campaigns alone and in conjunction with community organizing and service outreach prevention activities, and through work with the content and programing of alcohol portrayals in the media itself.

Public Information Campaigns

The use of television, radio, and print media to broadcast prevention messages has been especially vigorous in the past decade, particularly in the early and middle 1970s. Planned national campaigns have been sponsored by the National Council on Alcoholism, the National Safety Council, the National Congress of Parents and Teachers, the National Institute on Alcohol Abuse and Alcoholism, the National Highway Traffic Safety Administration, the U.S. Jaycees, various insurance companies, private industry, and the Distilled Spirits Council of the United States. The campaigns have emphasized acceptable and unacceptable uses of alcohol, health hazards, the problems of drunkenness, the need for moderation in drinking, and the need for action on drunk driving. Included were campaigns about the prevalence of alcoholism, but alcoholism as a subject has been emphasized less than it had been in the campaigns of the 1940s and 1950s. Recent emphasis is more upon appropriate uses of alcohol, drawing attention to its effects and to the social and health consequences of excessive use (Wallack 1980a).

The observed effects of these campaigns for reducing alcohol problem behavior have thus far been disappointing. Blane and Hewitt (1977) stated that generally for these campaigns "the effects of public education are largely limited to increasing knowledge and reinforcing

established attitudes or behavior patterns" (p. 32). Drunk-driving programs using a variety of information strategies have not been noticeably effective in reducing drunk driving or reducing crashes (Cameron 1978; Swinehart 1972). Kinder (1975) and Brecher (1972) found that tobacco and drug campaigns may have resulted in people's switching from one type of tobacco to another or to substituting one drug for another; Kinder observed that, in any case, drug and alcohol programs have generally been ineffective in bringing about attitude change. A special California campaign, using purchased media time in an effort to alter drinking behavior, similarly has been ineffective to date in changing knowledge, attitudes, or behavior, though the campaign has not yet been evaluated for its final cycles (Wallack 1979).

These findings must be considered in light of the kinds of evaluations applied to the campaigns. Wallack (1980a) observed that—

review on the effects of mass media would lead one to a healthy skepticism regarding the effectiveness of such a program implementation technique. This skepticism must be, however, somewhat tempered because of the flawed evaluations which have generated the body of effectiveness data. The longer and broader one looks, the more likely one is to find effects. Thus those who looked for direct effects of the anti-smoking mass media efforts found none. Yet those who considered the use of mass media as only a part of a comprehensive program to be examined (such as Warner 1977) found some interesting and positive results. It may be that determining the effects of mass media is a function of broadening research questions to gain better understanding of the wider view, rather than narrowing them further to assess individual exposure and reaction in greater detail. (p. 20)

The importance of taking a broader view is reflected in Zador's (1976) findings that traffic casualties declined during the period of Alcohol Safety Action Project (ASAP) activities in control as well as target communities. Room (1977a) speculated that "the ASAP program may have contributed to a general rise in public consciousness about alcohol-related casualties and a concomitant reduction in casualties, even though it had negligible particular effects in the target communities" (p. 30).

Continued development of public information campaigns for alcohol prevention demonstration projects requires an assessment of the conditions for success. Wallack (1980a) used Lazarsfeld and Merton (1948, reprinted in 1975) as a basis for reviewing the conditions and prospects for mass media alcohol problem prevention campaigns. Lazarsfeld and Merton identified monopolization, canalization, and supplementation as three conditions, one or more of which must be met, for a public information campaign to have desired effects. The monopolization condition occurs when there is little or no communication of opposing values, policies, or public images. This is impossible for alcohol prevention campaigns faced with alcohol advertising by the

alcohol beverage industry with annual budgets at least 100 times greater than the budgets for alcohol problem prevention campaigns, and with portrayals of alcohol in media programming that encompass the wide range of attitudes and beliefs about alcohol. In fact, many of these portrayals gratuitously encourage use and misconstrue or minimize alcohol's problematic aspects.

Canalization occurs when the individual is making a choice between products or services he or she has already decided on in general. The canalization assumption underlies brand advertising, advertisers being well aware that it is easier to expand a share of the existing market than to open a new one. Where new markets are being sought, advertising campaigns are major undertakings with enormous costs. Alcohol problem prevention campaigns that aim at changing deep-seated attitudes and long-established behavior patterns are highly unlikely to be effective (Wallack 1980a). However, the possibility of developing campaigns for highly specific alcohol problems, for which positive choices already exist, is left open for consideration.

Supplementation includes the use of interpersonal contact to reinforce the media message. The temperance movement brought local sources to bear to supplement its outpouring of print materials, organizing the members of local temperance societies to speak on behalf of the norms being advocated by the movement's literature and its political platforms (Cahalan 1976). A number of recent health campaigns have used supplementation to reinforce the campaign message, most notably the Stanford Heart Disease Prevention Program (SHDPP), which tested supplementation approaches in an experimental prevention project in three similar California agricultural communities (Meyer et al. 1976). The SHDPP sought to reduce cardiovascular disease risk factors in the general population of these communities through a combination in one community of a mass media campaign and personal counseling for high-risk persons meeting in small groups, through only a mass media campaign in the second community, and with the third community as a control. Generally, the SHDPP program achieved better short-term success in the media-plus-counseling community than in the media-only community (though the media-only community tended to "catch up" in time), and both treatment communities achieved positive results compared with the control community. Wallack (1980a) summarized the significance of evaluation findings of the SHDPP for alcohol prevention projects as follows:

The Stanford findings [of changes in behaviors that reduced risk factors] should be tempered by two comments. First, it may be possible that simpler dietary messages may be successfully transmitted through mass media; more complicated messages, however, may not only be resistant to mass dissemination but also to small group instruction. This has implications for alcohol and drug abuse campaigns which tend to be neither proscriptive nor prescriptive and thus somewhat complex in what they are asking of the audience.

Second, mass media alone, though effective in altering dietary behavior, appeared unable to induce change in other "lifestyle" problem behaviors such as smoking, overeating and [lack of] physical activity—behaviors, perhaps, more relevant to alcohol and drug use in terms of their intractability to any kind of inducement. (p. 16)

Wallack's comments raise another consideration in the conditions for successful alcohol problem prevention media campaigns. The nature of the message itself and its support from other sources is likely to be important. When a clear public health danger or threatening condition is widely perceived, and when it is clear what one must do individually to avoid worsening matters, public response can be both prompt and effective. Messages about the California water shortages of the mid-1970s resulted in a dramatic drop in water usage in the San Francisco Bay Area of as much as 25 percent, surprising both public officials and water companies, which increased rates on excessive water usage and then felt obliged to ask for rate increases to offset an unexpectedly sharp decline in revenues. Alcohol problem prevention campaigns, on the other hand, have contained a variety of messages, aimed for the most part at a subject easily perceived as being someone else's problem, and have lacked a clear basis for enforcement and changes in public policy.

Alcohol public information campaigns have begun to consider their messages more carefully in terms of their target audiences. Recent campaigns such as those conducted by California in the San Francisco Bay Area (Wallack 1979) have employed professional firms specializing in public service announcements. These firms develop psychosocial profiles of the target audience; pretest messages using consumer panels; develop efficient distribution plans based on the media times, shows, and publications most likely to be listened to, viewed, or read; and work closely with the project sponsor to develop themes and message content. In this respect media campaigns have advanced from earlier patterns of message development for public health announcements that presented health-significant content with little attention to tailoring the message to the audience. One feature of earlier television and radio campaigns, however, is still characteristic of current programs. Spots prepared for television and radio are PSAs—public service announcements—aired without charge by the stations as part of their FCC license obligation to provide public service. PSAs are likely to be buried at times unattractive to commercial purchasers, which are the times least likely to find a viewing or listening audience. The best prepared television or radio campaign melts into insignificance if it is unable to reach its audience.

Alcohol Beverage Industry Prevention Campaigns

The beverage industry has long been active in public information campaigns promoting moderation and responsible drinking. Beverage industry associations including the U.S. Brewers Association and the

Distilled Spirits Council of the United States (DISCUS), as well as individual producers such as Seagram's, Heublein, and Miller, all have conducted media campaigns. DISCUS alone has disseminated a volume of print material and television messages, in highly visible locations, with distribution measured in the millions of units and millions of dollars; its efforts rival the output of national campaigns sponsored by public health agencies. Seagram's (n.d.) has been producing moderation messages since the repeal of Prohibition.

In the 1970s, the themes of the messages emphasized responsible drinking, paralleling public information campaigns by health and safety agencies, and responded topically to ASAP's drinking and driving campaigns. The content of the messages has been and is similar to that of the public agency messages, including emphasis on knowing one's limits, knowing alcohol's effects, and demonstrating consequences (DISCUS 1977, 1978, 1979, n.d.). The campaigns also emphasize reaching youth ("It's the Call That Counts") in print and on television; e.g., they have shown messages during nationally televised football games since 1976.

The beverage industry's approach to media campaigns compares with the public health agency campaigns in two respects that are significant for industry participation in prevention programming. First, in addition to using campaigns and public speeches to promote "responsible drinking," the industry uses the messages as vehicles for promoting its own position against the use of regulatory prevention measures that may limit the marketing powers of the industry (DISCUS 1977, n.d.). The industry appears to view "responsible drinking" campaigns oriented toward individuals as doing little to harm the industry's sales (particularly if messages are interpreted as invitations to drink), but prevention campaigns advocating limitations on marketing activity through regulations restricting availability or raising prices are viewed as a threat.

Additionally, the beverage industry uses the availability of its public information campaigns as a foil to deflect other forms of prevention that shade more toward regulation. The recent controversy over labeling to warn of fetal alcohol syndrome (FAS) dangers is an example. Following preliminary recommendations to the U.S. Bureau of Alcohol, Tobacco, and Firearms (BATF) by the U.S. Food and Drug Administration concerning the dangers of FAS, a year-long battle resulted in an alternate warning program based on a public information campaign conducted jointly by the BATF and the Beverage Alcohol Information Council (BAIC), an industry-sponsored group comprising 10 beverage industry organizations ("BATF Decides" 1979; Beverage Alcohol Information Council 1980; "Treasury Uncorks" 1979).

Public Information Campaigns with Community Organizations and Outreach

Several recent and current alcohol demonstration projects pursue the supplementation approach. Two such projects sponsored by the

NIAAA are the Fetal Alcohol Syndrome (FAS) Prevention Program (California Women's Commission on Alcoholism Note 2) and the Two Approaches to Primary Alcohol Prevention Program (Florida State Department of Health and Rehabilitation Services Note 13). The FAS project proposes to issue warnings about the dangers of drinking during pregnancy to 1.8 million women of childbearing and near-childbearing age in Los Angeles County, through a combination of media campaigns and print material, and through contacts with women's and community groups and health services throughout the county. The contacts will include presentations to the groups and seminars for physicians, organized through a major volunteer drive. Since this ambitious project is in midcareer, outcome evaluations are not yet available. However, process evaluations by an outside evaluation consultant (Pacific Institute for Research and Evaluation, Lafayette, Calif.) have described the organization and development of the project's campaign message. Project organization requires close coordination between community organizers and those developing the theme and content of the media material and gives the organizers executive control over organizing activities within their geographically defined areas. Outcome evaluations can be expected to be informative. The evaluation is based on an interrupted time-series design, using mail surveys and review of birth records at six times (1,000 sample per survey) to follow up women who give birth during the course of the project.

An FAS project in Wisconsin reported in a process evaluation (no outcome evaluation is available) outstanding success in reaching bars and local alcohol councils (Wisconsin Association on Alcohol and Other Drug Abuse Note 14). With a budget of \$23,000, the project mailed information to 12,300 individuals, 3,400 professional and community groups; canvassed over 1,000 sites through 57 local alcohol councils; made, distributed, and had aired public service announcements on 89 of 130 radio stations and 20 of 22 television stations, receiving donations in air time that equaled the project's budget.

The second NIAAA-funded project in Florida attempted a media-community organizing approach, a media-only approach, and a control site comparison for establishing alcohol prevention programs in two Florida counties. The media component achieved some success in reaching people, using NIAAA television and radio spots with local tags. However, the messages referred the viewer/listener to the local alcoholism program first and to the project office second, without working with the local programs to provide any other than traditional alcoholism treatment services. A baseline telephone survey indicated relatively high levels of knowledge already about the alcohol survey items regarding alcohol use and abuse; the final report has yet to be received describing the media impact. The experiences of this project point out the necessity for care in coordinating media, service, and community organizing activity in projects that attempt combined media-outreach campaigns. The project also points out the need to clarify and to pursue vigorously community organizing in conjunction with a media

campaign. Organizing can be used to increase the efficiency of distributing messages (e.g., the Wisconsin FAS program). It can be used also to establish outreach services that actively recruit participants for the project.

The California Prevention Demonstration Program (Wallack 1978, 1979) is completing a project similar to the SHDPP and Florida projects in three counties in the San Francisco Bay Area. This project is unique in that it uses paid time for its three waves of television, radio, and billboard messages, with several weeks of exposure for each in each of 3 years. Evaluation is based on area-probability household interviews using 500-person samples in each county. Analysis of the third wave is now being completed. The interim evaluation concluded there were no changes in knowledge, attitudes, and behavior regarding alcohol in the two counties receiving media exposure compared with the control county. The proportion of people who had had contact with the community-organizing activities was small (3 percent, or 15 out of 500 in the interview sample).

The first evaluation has been instructive as to the difficulties associated with alcohol problem prevention media campaigns. First, notwithstanding the use of sophisticated message development and paid time instead of PSAs, about 60 percent of the respondents claimed recognition of the spots, and about 20 percent indicated apparent comprehension. Assuming that about 10 percent of the respondents are heavy and at-risk drinkers who would be the target of the message "Winners Quit When They're Ahead" (changed to "Winners Quit Drinking While They're Ahead" for the third wave), even if the project had met its objectives, the chance of finding a winner who had changed his or her ways in the sample would be very small (less than 10 in 500), and even then any change in attitude or drinking behavior might be so slight as to escape measurement in this study.

Second, the surveys found that from about 33 percent to 50 percent (depending on the commercial) of those who saw the television spots thought they were seeing alcoholic beverage commercials promoting consumption. This points up the importance of creating campaigns powerful enough to allow an audience to distinguish between alcoholic beverages industry invitations to drink and messages that caution moderation in drinking behavior.

Finally, during the first wave, the television spots raised objections from the California wine industry. The Governor of the State ordered the offending spots remade. The spots were redone, removing the elements criticized by the wine industry, thus pointing up the malleability of campaigns to satisfy powerful beverage industry interests.

At present, then, the public information campaigns about alcohol appear to have advanced little, despite complaints, beyond the campaigns of the early and middle 1970s. As Wallack (1980a) pointed out, however, the evaluations themselves may be flawed in looking for individual behavioral effects rather than for broader systems effects.

Prevention Demonstration Projects Working with Media Portrayals of Alcohol

A second approach to the use of the media for alcohol prevention lies in pursuing more accurate portrayals of alcohol in media programming and in alcoholic beverage advertisements (Mosher and Wallack 1979a). Wallack (1980b) suggested that prevention professionals ask "what effects can people have on mass media," in addition to "what are the effects of mass media on people." One NIAAA-funded project addressing the former question is the Mass Media and Public Education Project (Scientific Analysis Institute Note 15).

The Mass Media Project begins with a study of media portrayals of alcohol for information on normative uses and beliefs regarding the use of alcohol that can be analyzed for prevention content—both positive and negative. The investigators have developed an elaborate monitoring and coding scheme used to review selected examples of television shows, comic books, daily newspapers, magazines, college newspapers, and alcohol ads in magazines. From this monitoring has come a categorization of media portrayals based on sensitivity to prevention issues. Examples of negative portrayals include problematic uses of alcohol portrayed in a positive light (e.g., relief drinking or drinking for disinhibition effects); unrealistic expectations of the powers of alcohol; inattention to the consequences of alcohol abuse; gratuitous mentions of alcohol that encourage thoughtless and habitual consumption; use of alcohol to reinforce discriminatory and demeaning stereotypes.

Prevention intervention occurs through "cooperative consultation" with the producers in the media, to convert negative portrayals to positive ones. The process works on the premise that the negative portrayals come more from habit and convention than from deliberate intent and can be revised to improve both the portrayal and the esthetic quality of the article, show, or story. The investigators initially approached the producers with an analysis of the negative features of the portrayal, and with ideas for the piece's improvement. Now television writers initiate requests for consultation.

The investigators are able to manage this intervention due to their experience in working with media and their grounding in prevention concepts. Their efforts have been successful particularly with television, where their ability to provide attractive last minute "saves" against tight deadlines has been of help to producers. The project has gone beyond these early efforts to consulting on scripts and to proposing programs devoted entirely to dealing with alcohol use. Over 250 contacts have been made with writers, producers, and directors in the television industry. An advisory group of six influential television producers has been formed to explore industrywide standards for alcohol portrayals.

In other media similar successes are claimed. The Comic Code Authority, a private industry organization responsible for policing the content of comic books read by children, has revised its Code to eliminate negative portrayals. Relationships have been established with

college newspapers, magazines, and daily newspapers to consult on policies for reporting, accepting stories for publication, and reviewing the content of alcohol advertisements in college newspapers. The project has had published or accepted for publication eight journal articles (one to be reprinted in a communications textbook), and six more articles are in preparation. The project has a large and rich data base useful for secondary analysis and for positive portrayals that media producers might select for programing story development, standards for reportage, and acceptance of articles. New directions will include particular attention to the subjects of women, sex roles, youth, and minorities in relation to alcohol and more work with drug abuse issues, in addition to maintaining the monitoring system currently in place.

Efforts to date demonstrate some openness of the media field, traditionally closed to outsiders and regulators, for improving the prevention significance of alcohol portrayals. The project raises in a quiet and productive way major issues regarding what we want to tell ourselves about alcohol, at the level of content and at the level of control of the media. The project suggests for other industries that an intervention project based on "knowing the business" of both alcohol problem prevention and the particular industry, through independent consultants working with industry influentials on a voluntary basis, can convert a rich store of prevention-sensitive knowledge into positive policies regarding alcohol use.

Alcohol Control Agencies

Alcohol control agencies are those agencies primarily responsible for setting standards regarding the quality, availability, and price of alcoholic beverages. At the Federal level the leading agency is the U.S. Bureau of Alcohol, Tobacco, and Firearms, which sets standards for quality and content in alcoholic beverages and establishes and collects taxes on the production of alcoholic beverages. At the State level are departments of alcohol beverage control (ABCs) or liquor control boards. The 21st Amendment repealing Prohibition gives extensive powers to the States for regulating alcoholic beverages, including powers to control production, distribution, marketing, and taxation. The State ABC thus has major potential for prevention programing (Room and Mosher 1979).

Complexity and Bias in Existing Agency Regulations

In fact, to date, alcohol control agencies at both Federal and State levels have done little to develop their mandates for alcohol beverage control into policies and programs for the primary prevention of social and personal problems of alcohol use. Only in the last decade or so has attention been directed toward analysis of coordination of control agency and service-provider agency efforts to regulate alcohol use,

beginning with surveys of State alcohol control agencies' orientations toward treatment and prevention (Medicine in the Public Interest 1979). Findings indicated that ABC control agencies attend almost exclusively to problems of regulating the alcohol beverage industry: the ABC typically has little or no contact with treatment and service agencies at the State or local level or with highway safety agencies, and it does little to collect and report data that can be used for prevention programming. Students of regulatory policy have suggested that the long association between the liquor industry and control agencies has led ABCs to regulatory bias toward the economic health and the powerful political standing of the industry, to the exclusion of primary prevention concerns at the individual health and social levels (Bunce 1979; Morgan 1979; Mosher 1979).

Despite customary clauses in enabling legislation requiring the promotion of temperance, in the course of nearly 50 years State-level alcohol control laws and regulations have become so variegated and complex, so different from one State to another, and so riddled with special interest provisions, that simply understanding existing State regulations' relation to possible prevention programming is itself a Herculean task (Mosher 1979). One example from an NIAAA-funded project in Alaska demonstrates the complexities of relations between controls and consumption (University of Alaska Note 16): the State's ABC code is so complex that even the ABC board's own members and local officials are not sure of its regulatory impact regarding levels of consumption and prevention of alcohol-related problems. For example, communities' attempts to exercise State-permitted local option to control availability are undercut by the State law that permits purchase for private possession, resulting in thriving bootleg sales when local communities vote themselves dry.

Effects of Agency Regulation Upon Control of Alcohol Problems

The areas in which alcohol control agencies have jurisdiction for the implementation of prevention projects are price, availability, and the conditions of sale. As outlined in the section on Constraints, alcohol research has yet to produce conclusive findings about control mechanisms applicable within these areas. It is not clear what effects control mechanisms have on styles and patterns of alcohol use within the sociocultural model, nor is it clear what effects control mechanisms have on levels of consumption and related cirrhosis and other physical complications. Smart (1980) reported that studies of consumption as a function of outlet distribution and conditions of sale have been inconclusive, except for factors of income and urbanism which are beyond the scope of a demonstration project. Small-scale increases or decreases in availability (at local levels and noncomprehensive) have not resulted in conclusive findings of increases or decreases in consumption. Modest changes in price levels, particularly in the United States where the basic Federal tax on beverage alcohol has remained

the same for nearly 30 years, are not likely to have much effect on consumption. Alterations in the conditions of sale, which already vary substantially among the States, have proved inconclusive also (Bruun et al. 1975; *Medicine in the Public Interest* 1979; Room 1977a).

This is not to say that controls have no effects. Most research findings regarding alcohol controls are based on minor changes that are rather easily offset by switching to different beverages, by making different arrangements for purchasing, or by changing the times and places one drinks. Research also has been based on overly general comparisons, often without adequate data (Douglass et al. 1979). Definitions of terms themselves are subject to expansion and revision (Smart 1980). Some recent research on the effects of controls has asked precise questions with productive results. Parker et al. (1978) found that States which place per capita population limits on outlets have lower rates of consumption and cirrhosis than those States without such limits. This differs from asking whether "control" States (issuing private licenses for retail outlets) or "monopoly" States (the State retails alcoholic beverages) have an effect on consumption. Research to find interesting questions about the consumption effects of existing patterns of control is a new and promising area, using both cross-sectional and longitudinal studies in addition to monitoring both small- and large-scale changes in control structure.

Little is known about the effect of controls upon alcohol-related problem consequences of consumption within the sociocultural model. The emphasis of the model upon the variability of drinking patterns and consequences according to differing norms, practices, situations, and settings leads to great confusion in tracing problem consequences from a change in regulation or a pattern of control through drinking patterns to problem outcomes. The possibility of interrelationships among different problems with variation in control patterns is enormous, regardless of the consequences on consumption. College students in States that have raised the drinking age may drink less, but get drunk more often and get into more trouble when they do (Urban Rural Systems Associates 1980). A community that exercises "local option" to eliminate in-town alcohol outlets might experience more highway crashes caused by people coming home from outlying bars. One is led to speculate that basic drinking patterns are not immediately amenable to changes in alcohol control regulations—that one must look broadly for long-term effects rather than narrowly for short-term effects (Wittman 1980).

Finally, the mandates for the exercise of control prerogatives are unclear. The relationship among the public (local community groups, the business community, neighborhood associations, various socioeconomic and ethnic groups), the official alcohol control agencies (particularly at local and State levels), and the alcohol beverage industry is not well understood regarding the dynamics and the factors that influence alcohol control policy (Wittman 1980). Without such an understanding,

the political basis for exercising prerogatives to create control policies remains uncertain.

Control Agencies' Alcohol Problem Prevention Projects

Alcohol control agencies' alcohol problem prevention demonstration projects appear to be developing in two directions. First, the demonstration project can serve a more frankly exploratory purpose, spending a great deal more time on research before trying out policy and service alternatives. Second, the demonstration project can work more toward improving the present performance of the control system by filling in gaps and making connections between control activities and prevention activities already mandated within control and service agency charters.

Examples of the first direction are seen in two NIAAA-funded research prevention demonstration projects and in one project soon to be funded. "Alcoholism Prevention in Small Rural Communities" (University of Denver Note 17) is exploring alcohol prevention measures in energy development-impacted mining communities in western Colorado and Wyoming. Beginning with an analysis of agency data on alcohol problems, the project has expanded to interviewing and observation to determine alcohol use patterns and consequences in six small communities. The investigation includes in part a study of licensing practices, the distribution of outlets, and a study of conditions of sale. Now in its second year, the project is forming advisory committees in two test communities to explore possible agendas for action in the third year to deal with alcohol problems, including potential changes in local regulation and enforcement patterns.

The second NIAAA-funded project is investigating the effect of raising minimum purchasing age, using surveys of youths 16-19 years old in a State in which the age is about to be raised from 18 to 21. The project will ascertain alcohol-related attitudes and behaviors of youth across the change in law and information on law enforcement policies and practices. These data will be compared with parallel data collected from a neighboring State in which the minimum purchasing age has been 21 for many years (Boston University Note 18).

The third project is a study of the impact of recent changes in alcohol availability upon university students and regulatory practices following a change in State law removing restrictions on off-sales near two university campuses. Analysis will determine the relationships between availability, drinking practices, drinking problems, and regulatory activity (University of California Note 19). Surveys of the university student populations' drinking practices and associated problems were conducted at the time of the change in law and will be repeated 2 and 3 years after. Changes in consumption and drinking practices will be analyzed in light of changes in amounts of alcohol exposed for sale and changes in the patterns of outlet distribution. Alcohol control agency officials, university administrators, and community groups will be interviewed to obtain their perceptions of student alcohol use and related problems.

Changes in control practices will be monitored, to be compared with actual changes in availability and student drinking behavior and with perceived changes in availability and student drinking behavior on the part of community groups and officials.

An example of a demonstration project working to improve the prevention-sensitive operations of a State alcohol control agency is found in a California program sponsored by the State Alcoholic Beverage Control Department. Mosher and Wallack (1979b) reported on a training program for bartenders and other servers in drinking establishments often identified as the point of origin for a trip that ended in an arrest for drunk driving. The training program includes positive instruction in recognizing incipient inebriation, advice on how to cut off customers without antagonizing them, and steps that can be taken to use the drinking environment to promote moderation in drinking. Owner and bartender demand for training remains high, even though threat of ABC action against the licensee has been removed with repeal of the State's Dram Shop law. The program has met with a positive reception by bartenders, bar owners, and the press.

While this particular project is modest, it points to needed efforts to improve the patterns of regulation and enforcement currently in effect. State ABCs and local zoning officials generally spend a great deal more time and effort processing license applications than they do in the enforcement and monitoring of regulations governing their operation (Wittman 1980). The general effects of upholding regulations might, over the long term, be more significant than any short-term effects in dealing with specific incidents (Room 1977a).

Nonalcohol Regulatory Agencies

Many nonalcohol regulatory agencies at the Federal and State levels have an impact on the patterns of alcohol use and their consequences. Transportation-based agencies are required to be sensitive to problems of alcohol abuse among operating personnel for trains, boats, aircraft, trucks, and autos, and are required to set policy for alcohol consumption by passengers. Land-based agencies, such as the U.S. Bureau of Indian Affairs and the U.S. Department of Defense, are responsible for policies affecting a full range of personal and social uses of alcohol. Economic-based agencies have the power to affect the consumption and indirectly the marketing of alcoholic beverages, through the work of agencies such as the Small Business Administration and the Internal Revenue Service.

Until recently, little attention had been directed to the potentials of prevention programing within these agencies and in coordination with the lead alcohol agencies (NIAAA and the BATF at the Federal level; the ABC and the State alcohol agencies [SAA] at the State level). The prospects for prevention programing in nonalcohol Federal regulatory agencies have been explored in a preliminary way by Mosher and Mottl (1980), in a paper prepared for the National Academy of Science's (in

press) work on the development of alternative prevention policies. Their study does not include Federal agencies responsible for highway safety, which currently are acting in regard to alcohol-related issues. Mosher and Mottl's findings are summarized here in regard to their implications for the development of prevention programming in nonregulatory agencies.

Need for Additional Data and for Analysis of Existing Agency Records

Data pertinent to alcohol's involvement are often unavailable for activities and problems for which the agency has responsibility. Transportation-based agencies have collected minimal data on the presence of alcohol in crashes and accidents. Land-based agencies have collected little data on consumption practices and consequences for comparison with their alcohol availability policies. Economic-based agencies often do not collect data that allow an estimate of the importance of alcohol in particular commercial activities; the IRS, for example, has no way of knowing at present how much of the tax-deductible business lunch is going for the purchase of alcoholic beverages. This absence of data is particularly critical for the study of crashes, accidents, and injuries in transportation-based industries (Aarens et al. 1977).

Equally important is the analysis of data and records that the agencies do keep. Little would be gained by embarking on a new round of data collection and reporting without analysis of existing materials and the development of objectives to guide the collection of new data. The agencies presently keep records that researchers well grounded in alcohol problems can review for significance for prevention demonstration projects. Mosher and Mottl (1980) reported one such analysis of alcohol involvement in the railroad industry conducted for the Federal Railroad Administration by the University Research Corporation (Mannello and Seaman 1979). The researchers, checking findings from interviews with workers, accident investigators, and industry officials against accident reports, concluded that alcohol involvement is seriously underreported. Mosher and Mottl provided additional analysis and comment on areas that might be explored further as the basis for developing prevention projects.

Directions for Future Alcohol Prevention Demonstration Projects

Agencies with jurisdictions in which alcohol abuse can have immediate, critical consequences: Agencies and firms such as those controlling the transportation industry tend to have strict alcohol control regulations, prohibiting alcohol use and specifying harsh punishments. These agencies also show relatively low incidences of reported alcohol-related problems. It is possible that alcohol involvements and problems are underreported and that corrective measures are underenforced, to protect individuals, the industry, and the agency from severe conse-

quences of reporting and public exposure (Mannello and Seaman 1979). This pattern suggests the need for (1) investigating prevention approaches that lessen the career-destroying consequences for the individual and (2) spreading responsibility for alcohol control to include the management of the environment in which alcohol problems develop.

Agencies that deal less with critical drinking situations, but more with widespread social drinking: Agencies such as the U.S. Department of Defense may view the displacement of alcohol problems onto individuals as absolving the agency of responsibility for the consequences of alcohol abuse, but this is clearly not the case for an agency that must pick up the tab for all damage, casualties, and decreases in performance, as well as individual treatment costs. Agency policies that shape availability, design environments, and manage drinking to avoid problem consequences are as important as current arrangements for sanctions and treatment of individuals. The Defense Department's mild attempts to "deglamorize" alcohol and to adjust price, availability, and conditions of sale and consumption indicate first steps in the direction of using organizational manipulation, in addition to focus on the individual drinker, as the basis for alcohol control policy (Mosher and Mottl 1980).

Interagency Coordination for Prevention Programing

The development of alcohol prevention demonstration projects in nonalcohol regulatory agencies requires initiative from several sources, including alcohol agencies such as the NIAAA, BATF, the ABCs, and the SAAs (State alcohol agencies responsible for treatment services); the regulatory agencies; the industry; and public groups. From a research demonstration perspective, it is important to emphasize problem solving. Problem solving begins with exploratory research and analysis of courses of action prior to undertaking an intervention effort in order to develop a strong empirical base for prevention demonstration projects. Without this base, the prevention activity is likely to become gestural and symbolic in nature, without tangible consequences in the reduction of alcohol problems.

Although nonalcohol regulatory agencies are a source both of information and authority in which to undertake the development of prevention initiatives, the means for working with the agencies to develop prevention initiatives will require further study. Mosher and Mottl discovered bureaucratic resistance to accepting alcohol prevention programing as a part of the nonalcohol agency's regulatory activities, even in agencies in which the legislative authority and mandate for doing so is clear. Possible approaches to working with the agencies include the "cooperative consultation" approach of the mass media and public education project discussed earlier; the development of consumer- and user-based constituencies who demand that alcohol prevention measures be instituted; coordination between alcohol and

regulatory agencies to develop pilot projects for which the alcohol agency and the regulatory agency share responsibility.

Voluntary Organizations and Community Movements

Past emphasis at the national level on the role of voluntary organizations for participation in prevention demonstration projects has emphasized organizations' national standing and their abilities to reach large numbers of people through local chapters. NIAAA-funded projects (with the Boys' Clubs of America, the U.S. Jaycees, the Education Commission for the States, the YMCA, the National Council on Alcoholism, and the National Congress of Parents and Teachers) all have worked to raise awareness and to disseminate information about alcoholism and alcohol problems to wide audiences.

Some local- and State-level voluntary organizations have developed unique projects. The Partners program in Denver uses volunteers called senior partners to work with youth (junior partners) who have been referred by courts and schools for treatment (Note 10). Individual junior partners are matched and assigned to individual volunteer senior partners following a screening and training program for the senior partners and an evaluation of the junior partners' needs. The project has demonstrated about a 25 percent reduction in crime and truancy recidivism rates for the youth engaged in the program. Even without its current NIAAA-funded training and education for alcohol problem prevention component, the project is worth following for its effect in reducing alcohol-related problems specifically (this is being done along with evaluations of the alcohol problem prevention component; no outcome information is available for the still-operating project). The Utah Alcoholism Foundation's "Cottage Program" in Salt Lake City (Note 21) had substantial success using trained volunteers to go door to door for purposes of holding neighborhood meetings to raise awareness and do secondary prevention work (2,000 meetings, 12,000 participants, and 14,000 hours of volunteer time in one year). The FAS campaign by the California Women's Commission on Alcoholism (Note 2) and the Wisconsin Association on Alcohol and Other Drug Abuse programs (Note 14) make widespread use of volunteers to cover the large areas of Los Angeles County and the State of Wisconsin.

Local-level alcohol demonstration prevention projects also have had some success in obtaining volunteer services of groups and other organizations, though the prevention project itself is not conducted by a volunteer organization. Several NIAAA-funded prevention demonstration projects receive donated time and effort from individuals sitting on advisory groups and from other agencies and voluntary organizations.

In the United States, volunteer effort and donated time are important elements in the development of community services generally. Citizens devote time to sitting on local boards and commissions, parents donate time to youth organizations, people devote time to public service projects sponsored by churches and voluntary organizations, neighbor-

hoods organize quickly around zoning and public school issues, and people donate time to local political causes and elections. Alcohol problems, as the above projects and the history of the temperance movement have demonstrated, have the capacity to bring volunteers out in great numbers; alcohol also has the power to make people wary of organizing efforts. The tradition of organizing in the United States draws strong local representation on both sides of alcohol issues when they appear to be matters of community concern.

For the most part, it appears that the public at large is not inclined to organize local or mass movements around alcohol issues, despite the efforts of particular prevention projects (Room 1977a). Alcohol prevention projects in the public eye have for the most part focused on youth in school settings, upon secondary prevention issues, and upon warnings of the dangers in personal misuse of alcohol, rather than upon general, environmental, and community concerns. Prevailing public acceptance of the disease model of alcoholism draws attention to the obvious heavy drinker and away from drinking patterns and practices generally. Alcohol outlets and alcohol availability generally are perceived as sources of only such alcohol-related problems as noise and congestion (Wittman 1980), litter (Wallack 1979), and occasionally objectionable behavior. Availability is not seen as *instrumental* in creating alcohol problems, except in some minority communities (where outlet densities are high, problem behaviors more frequent, and ABC or police enforcement is less intense), and in areas where conflicts occur between opposing general population groups (Wittman 1980).

Within the general public view of alcohol's place in society, primary alcohol prevention projects at the local level aimed at general population groups (not just dependent and at-risk groups) seem unlikely to have much success in attracting local support and voluntary effort. Two currently operating projects funded by NIAAA are exploring the prospects of organizing at the local level, so far with meager results (University of Denver Note 17; University of Texas Note 20). The long tradition of volunteerism for alcoholism and secondary prevention has not moved into the area of local organizing and community movements for primary prevention projects. Volunteer effort and local organizing remain a challenge for the primary prevention demonstration project aimed at the communitywide population.

Replication of Alcohol Prevention Demonstration Projects

The rationale for sponsorship of prevention demonstration projects includes replicability and disseminability of the project to other sites and populations. The NIAAA Prevention Division is currently at the endpoint of a 3-year, eight-project trial program to explore issues in replication of the original ESD, CASPAR, and University of Massachusetts projects (National Institute on Alcohol Abuse and Alcoholism n.d.). The ESD project is being replicated in Massachusetts and Connecticut; the

CASPAR project is being replicated in Utah, Georgia, and Virginia; the University of Massachusetts project is being replicated in Nevada, North Carolina, Michigan, and (with State rather than NIAAA funding) Illinois. The replication projects are funded through NIAAA grants of \$50,000, with additional funding from States and local replication sites, and involve the SAA. NIAAA has also provided a training contractor (Urban Rural Systems Associates of San Francisco), which started in early 1979 to assist the projects with program planning and to ascertain needs for assistance from the original projects and for help in evaluation.

Concept and Program Development

Generally the prevention concepts in each of the three model projects have traveled well to the replication sites. Replication site project directors have had little difficulty mastering basic project concepts and project design. Other key actors at the site also have easily grasped the project concepts and with few exceptions have accepted them. Some difficulties were encountered, however, in the transmission of the concepts. Workbooks specially prepared by the NIAAA describing each of the model projects did not contain adequate "how to" information. Direct contact with the staff of the original project site proved more helpful. The well-documented, more closely defined model projects were easiest to grasp. The ESD project, with its kit of educational materials and its straightforward teacher training program, proved the easiest to transmit to replication project staff. The University of Massachusetts project, composed of several components which have been less clearly documented, proved more difficult. These difficulties were overcome through contact with the original staff.

More difficulties have occurred in programing and planning than in grasping prevention concepts. The training contractor observed that the tasks of organizing staff, setting priorities, and working with other groups and agencies all have required substantial consultation to replication projects.

The basic lesson in implementation of replications is that there are no shortcuts. Project effort for implementation at the replication sites is not substantially reduced by virtue of the fact that the project had been developed and implemented once before. That a previous project has shown it possible to organize a particular range of activities to attract youth and host organization participation is not a guarantee that such support is automatically forthcoming a second time. The same processes are required for project development, bringing with them requirements for creativity by the project director in devising ways of responding to local conditions. The first year has been hard on project directors: four out of the nine left, due to either difficulties in meeting project responsibilities or being so successful in doing so that they were hired away.

Extreme variations in site conditions have strained original project designs. The Nevada replication of the University of Massachusetts model is located in a university campus attended by commuter students, in a city in which drinking is encouraged by the local casino industry in an environment of unrestricted, round the clock alcohol availability. Work on prevention programming for dorm and campus life and work on policies to control alcohol availability in this environment require major rethinking. The Utah replication of the ESD project has run into difficulties with ESD's carefully designed "responsible drinking" curriculum in the face of one replication community's official position that only abstinence is to be taught to schoolchildren. The peer leader and group activities of the CASPAR project are extremely difficult to undertake in the low-density rural communities of the replication sites in Georgia and Virginia. Thus, people who replicate alcohol prevention demonstration projects must exercise considerable creativity finding new ways of meeting project objectives in sites greatly different from the original one.

Slight modifications in site lead to moderate shifts of emphasis within the basic themes and activities of the original project. The Illinois and Michigan sites for the University of Massachusetts project replication have used the project resources to strengthen enforcement of campus regulations for student behavior and treatment activities more than has the original project, since the two replication sites had fewer such services to begin with. Both University of Massachusetts replication projects have been complicated by the recent raising of the minimum purchase age from 18 and 19 to 21, inserting enforcement agendas into responsible use orientations. Individual project progress reports will be helpful in understanding the capacity of differing site factors to create variations in implementation approaches. The project progress reports should be especially instructive for discerning the points at which variations in site factors become so extreme that they face the need for revision in original project objectives (Urban Rural Systems Associates 1980).

Evaluation

Evaluation has proved difficult for the replication sites. Initial plans by NIAAA to provide an evaluation contractor to work in a consultative capacity similar to the training contractor were shelved in favor of arranging for the evaluators of the original projects each to develop an evaluation handbook for use by the replication staff. These handbooks (Mauss and Hopkins 1979; White and Biron 1979) have worked well in assisting the replication sites to collect and analyze data in a standardized format, following step-by-step instructions. All of the replication sites have been able to arrange for project evaluation, either through their own staff or through the use of staff and facilities from nearby institutions. However, because of the long lead times involved in developing the handbooks, evaluations are now running 9 months to a

year behind project activities, and for the most part, only baseline data are available in reports just recently submitted. Also, owing to limitations in funding, the replication sites are not analyzing project activities as fully as the data would allow.

Conclusions

The alcohol problem prevention demonstration project of the 1980s has matured from the project of the early and middle 1970s. The early projects were ambitious, full of zeal and intentions to do good, largely in the areas of consciousness raising, information dissemination, and with more attention than today upon secondary prevention. The projects lacked clearly specified objectives of alcohol problem elimination or reduction in their general aims of "promoting responsible drinking" and "reducing alcohol abuse," relying for evaluations of their efforts upon reports of the numbers of people reached, the number of presentations given and classes held, the number of referrals made, and anecdotal accounts from participants expressing the personal value of the project. They often promised to reach large and entire population groups. They aimed primarily at youth, in projects located predominantly in school settings and youth-serving organizations.

More recent NIAAA-funded prevention demonstration projects are still full of good intentions, but they are leaner, more skeptical, more inquisitive, more careful in statements of objectives and intentions, conceptually tighter, more modest in whom they mean to reach, what they mean to do with people, and more deliberate in how they plan to go about it. They are oriented more toward problem solving than toward informing the public about alcohol problems, viewing information as a means rather than an end in itself. They are more curious about what they are doing and are more careful to devise means for finding out. They are more likely to be conducted by public health agencies, university- and research-related organizations, rather than by schools, voluntary organizations, and independent service-oriented organizations. They are also beginning to go beyond a focus on the individual to look at other subjects—changes in minimum purchase ages, mathematically based model systems, drinking practices and problems in communities, work with institutional management and social milieu, while still, for the most part, retaining a primary interest in the effects on the individual. Where the projects focus on the individual directly they are likely to do so with multiple and specialized techniques.

Much of what is said about alcohol demonstration prevention projects is drawn from developments in the NIAAA Prevention Division. The growth in prevention demonstration projects coincides with the growth of the NIAAA prevention effort itself. A 2-year hiatus in funding new projects, from winter 1975 to fall 1977, marked a change in NIAAA's orientation toward prevention projects. Through its own

evaluation of its earlier grants during this period, NIAAA developed more rigorous standards for the design and evaluation of primary prevention projects (CONSAD 1977, 1978). The results appeared in official form in the grant guidelines issued in March 1979, but the effects of the shift in orientation were being felt in the projects as early as 1977 through staff consultations to applicants and via the conditions placed upon project approval by review committees. It is difficult to know whether the NIAAA has provided a model that States and other agencies have followed, or whether the shift in orientation has been general. Whichever it is, NIAAA has been at the forefront in the development of research prevention demonstration projects.

The NIAAA-funded prevention demonstration projects lately have adhered more to the public health ideal of the project as an exploration of the value of new and untried ideas for providing preventive services. However, the projects and new applications often still lack a thorough discussion of alcohol research pertinent to their topics, and as a whole, the projects have not explored the boundaries of the tripartite public health prevention model. The areas of the model that have not been much explored are those dealing with the agent—availability of beverage alcohol—and the environment—the situations, settings, norms, and regulations in which drinking and its sequelae take place. It is most important that future demonstration projects be more current with research literature; that the literature itself be more current in reviewing projects; and that projects be conceptually more adventurous than they have been, if the field is to advance to a next round of prevention demonstration development. There are impediments to this development in the absence of dissemination of research findings, and in the absence of useful reporting for projects already in progress, a subject that will be further discussed below.

The heart of the demonstration project lies in its implementation—in converting new and untried ideas into a scheme for the delivery of prevention services. The implementation of demonstration projects appears for the later as well as the earlier projects to be as much art as science. Project planning, organization, and coordination require considerable inventiveness and adjustment in operations to meet the unexpected occurrences that crop up. As projects move increasingly into dealing with environmental, in addition to individual, concerns, the need for implementation skills will be accentuated for working on untrod ground and at higher political stakes.

It has become clear in the operation of the sounder projects that evaluation of the demonstration project is both a tool for project development and for reporting back on the project's findings. Process evaluations provide feedback vital to assessing the value and efficiency of project activities for meeting project objectives, a benefit demonstrated repeatedly throughout the projects. Much of the "evaluation" takes place informally, as the project director assesses, perhaps monthly, how the project's activities are moving, leading to a kind of "inching along" incremental approach to project direction. This seems

to suffice for some projects. A much more powerful process evaluation is available, however, resulting in more pronounced and more effectual improvements in midcourse corrections, when the process evaluation is based on formal observations, particularly those of an outside observer (California Women's Commission on Alcoholism Note 2), and upon interim readings of the project's outcomes (University of Pittsburgh Note 4; Partners Note 10).

The establishment of appropriate outcome measures depends primarily upon the clarity and purposefulness of the project's objectives. Precise objectives invite precise and informative outcome evaluations. Technical difficulties may be substantial, but these are relatively minor in comparison to problems of setting objectives. The difficulty is in knowing precisely what's wanted, a task made especially strenuous by the state of theory in the alcohol field. Projects with clearly defined objectives are in a better position to address unexpected and even unobserved effects from external factors. Projects increasingly are finding it necessary to develop evaluation designs that allow for unintended as well as intended effects.

As the prevention demonstration project matures, so will the power, conclusiveness, and informativeness of its findings. One area in which increasing attention will be required is that of monitoring the project effects on the environment of regulations, availability, norms, and kindred projects, then relating changes in the environment to changes in individuals. Alcohol problem prevention projects to date focus rather singlemindedly on individual effects, the problems of which are discussed above in the section on mass media campaigns. The impact of prevention projects may actually be better understood in terms of effects on the environment, which in turn has effects on individuals, perhaps even the individual who comes after rather than the one who is exposed to the initial project treatment. If alcohol use and abuse is genuinely a social regulatory, social, and physical environment, which in turn provides a new set of guides for drinking practices and consequences at individual levels. This is an area as yet unexplored, except at the edges (e.g., the University of Pittsburgh project's interest in "system effects"), yet it is one increasingly called to attention by current alcohol problems research, and is one which logically calls for exploration according to the public health model.

Expectations for Alcohol Prevention Demonstration Projects

This discussion concludes, on the whole, that the public health model prevention demonstration project, for all the quirks and gaps of the alcohol field, is evolving as a powerful tool for exploring alcohol knowledge in ways that can lead to improved prevention services. Certainly the interest exists in the field, along with the necessary skills to develop projects as sound empirical explorations of prevention con-

cepts. A question exists, however, as to whether the field will be able to continue this line of development.

Past expectations for prevention demonstration projects, both by sponsoring agencies and by those conducting the projects themselves, have tended to be extremely ambitious, and the projects have promised much that they have not delivered. Promises of immediate reduction of widespread alcohol problems now appear unrealistic. But the alcohol prevention demonstration project exists in a field with a history of demands for immediate positive results with roots extending back to the temperance movement in politically and socially volatile milieux. Public interest is an unknown quantity for supporting the slow, steady, and somewhat expensive pursuit characteristic of the well-grounded, well-evaluated prevention demonstration project. The capacity of sponsoring agencies to secure public funding for prevention projects is still based largely on promising to meet urgent needs of individuals in "at risk" populations, as indicated by the special initiatives for former Secretary of DHEW Califano's women and youth projects and by the recent congressional support for smoking and alcohol projects aimed at youth. While the recent ADAMHA position paper places a strong emphasis on the value of the rigorous and patient development of prevention demonstration projects (Klerman 1980), it remains to be seen how such projects do in the public marketplace, and whether such projects are able to develop a constituency of their own.

Nurturing Alcohol Prevention Demonstration Projects

If prevention research demonstration projects are to continue to develop, the projects reviewed above suggest a need for additional support in three areas: flexibility in types and levels of support, information dissemination, and technical assistance.

Flexibility in Levels of Support

To date, thinking about the support of prevention demonstration projects has tended to assume that the projects are all very much alike. Perhaps this was so in earlier days, but it is true no longer. The projects are now beginning to appear in different stages of development, ranging from projects that will require substantial developmental research to formulate firm prevention objectives, to those projects which are almost exclusively evaluative in nature. Projects that require substantial development research are those that are opening relatively new ground, in areas where little data exists, and in which extensive organizing will be required to implement the projects. Examples are projects such as communitywide efforts to work with cultural and normative patterns which will require substantial ethnography, followed by a lengthy period of organizing to develop prevention activities at both environmental and individual levels. Such a project might require 5 years to produce results. Projects which are almost exclusively evaluative in nature are

those that look at "natural experiments" across a limited period of time. Other projects might require longitudinal or trend evaluations stretching over several years, even though the treatment is relatively brief. Flexible funding for these projects, based on the project itself rather than upon predetermined funding levels for a typical or standard project, would allow greater variety in types of projects.

These projects require considerable openness of mind for the variety of different ideas that might be proposed. To this point, projects such as those coming to the NIAAA have been relatively similar in type, aimed largely at individuals, targeting largely on youth. Yet a wide range of subjects is emerging as important for investigation within the broad confines of the public health prevention model. The principle of funding implementations, regardless of the idea, so long as the ideas are well-founded and used as the basis for a well-designed project, is a principle that would benefit the continued development of prevention demonstration projects. Such an approach is perhaps difficult for new ideas likely to lack a constituency. The alcohol field is at the point where it would benefit from concentration on new ideas for prevention; and it is within the spirit of a knowledge-seeking prevention demonstration program to use its budget to fund a variety of projects, rather than a large number of the same types.

Information Dissemination

Better reporting on new developments in alcohol research, in findings from projects, and in information about projects in progress would be invaluable for the stimulation of prevention research demonstration projects. Clearinghouses such as NCALI could assist substantially in this area. The field lacks a sufficient number of review papers, summary research reports, and state-of-the-art papers for dissemination to audiences outside the immediate research community. Proceedings of small research conferences (e.g., Harford et al. 1980; Room and Sheffield 1976) are of particular value.

Reports of findings from projects are not readily available, either. Partly the problem is a matter for persistent bibliographers, and partly it is a matter of developing adequate reporting formats and mechanisms for dissemination.

Finally, more information is needed about the projects themselves. Usually projects in their final reports give a rundown of the implementation process. But these reports come in late, perhaps at the end of 5 or 7 years' worth of effort, and then often leave out much. The field lacks a generalized and simple periodic reporting format, with sufficient flexibility to allow for project individuality, that would be of assistance both to students of alcohol problems, sponsoring agencies, and to others working in the project's subject area.

Technical Assistance

University- and research-related organizations are generally able to take care of themselves in the design, implementation, and evaluation of research projects, and often bring in outside consultation when they need it. Monitoring visits by sponsoring agencies also are helpful. A large pool of potential projects, however, might come from agencies and groups without either the resources or the expertise in-house to develop a well-designed, well-evaluated project. Such groups and agencies include local planning and zoning offices, voluntary associations and groups organized around particular alcohol issues, and minority organizations, who are faced with prevention-significant alcohol problems or issues for which demonstration projects are important. As prevention projects grow in rigor and complexity, there is the danger that sponsoring agencies will tend to overlook those without sophisticated planning and evaluation skills. Provision for technical assistance in these areas is necessary to keep the field open to fresh ideas for prevention projects from new sources.

Project Reference Notes

Selected research demonstration projects funded by the NIAAA Prevention Division or by the various States.

The paper's discussion of NIAAA-funded projects is based upon review of grant files in the Prevention Division, including unpublished original applications, renewal applications, progress reports, correspondence, and comments of the Prevention Division's review committee. Persons interested in project reports and summaries should contact the original projects listed below.

1. Educational Service District No. 121, King County, Wash. Here's Looking at You Alcohol Education Curriculum Project Seattle, Wash. Clay Roberts, Principal Investigator
2. California Women's Commission on Alcoholism Fetal Alcohol Syndrome Prevention Program Inglewood, Calif. Ann Baxter, Principal Investigator
3. Social Advocates for Youth Early Age Prevention of Alcohol Abuse San Francisco, Calif. John Harrington, Principal Investigator
4. Minimizing Alcohol Problems (MAP) Project University of Pittsburgh Pittsburgh, Pa. Howard Blane, Principal Investigator
5. Cambridge and Somerville Program for Alcoholism Rehabilitation (CASPAR) Youth at Risk: Prevention Strategies Somerville, Mass. Lena DiCicco, Principal Investigator
6. Illinois, State of: The Illinois Alcoholism Prevention Initiative is a demonstration grant program awarding 34 grants to local projects, starting Jan. 1, 1980. Twenty-one 6-month and 13 18-month projects totaling \$531,000 have been awarded. Each

- project has an evaluation component. Contact: Alcoholism Program Development, Division of Alcoholism, Department of Mental Health and Development Disabilities, 160 N. La Salle St., Room 1500, Chicago, Ill. 60601.
7. Boys' Harbor Teenage Alcohol Abuse Prevention Program New York, N.Y. Robert North, D.D.S., Principal Investigator
 8. Boys' Clubs of America Project TEAM (Teens Explore Alcohol Moderation) New York, N.Y. Donald K. Jordan, Principal Investigator
 9. University of Massachusetts Demonstration Alcohol Education Project Amherst, Mass. David Kraft, M.D., Principal Investigator
 10. Partners, Inc. Prevention of Alcohol Problems in Pre-Delinquent Youth Denver, Colo. Robert C. Moffitt, Principal Investigator
 11. Committee for Economic Progress Developmental Services for Children of Problem-Drinker Parents Orangeburg, S.C. Martin Williams, Principal Investigator
 12. Institute for Scientific Analysis California Indian Youth Alcohol Education Project San Francisco, Calif. Dorothy Miller, D.S.W., Principal Investigator
 13. Florida State Department of Health and Rehabilitation Services. Mental Health Program Office, Alcohol Rehabilitation Program Impact of Two Approaches to Primary Alcohol Prevention Tallahassee, Fla. Stuart N. Cahoon, M.D., Principal Investigator
 14. Wisconsin, State of: Fetal Alcohol Syndrome 1979 Public Awareness Campaign evaluation report presented to Citizens' Advisory Council on Alcohol and Other Drug Abuse, May 12, 1980; D. Pierotti, M. Redmond, S. Lennert, B. Trundell, Madison, Wis.: Wisconsin Association on Alcohol and Other Drug Abuse, Inc., March 1980.
 15. Scientific Analysis Corporation Alcohol Mass Media Public Education San Francisco, Calif. Warren Breed and James DeFoe, Co-principal Investigators
 16. University of Alaska, Criminal Justice Center Alcohol Control in Village Alaska Anchorage, Alaska Stephen Conn, J.D., Principal Investigator
 17. University of Denver, Denver Research Institute Alcoholism Prevention in Small Rural Communities Denver, Colo. Alma Lantz, Principal Investigator
 18. Boston University Assessing the Impact of Legislation Raising the Massachusetts Drinking Age Norman Scotch, Ph.D., Principal Investigator
 19. University of California, Social Research Group, School of Public Health Alcohol Outlets, Drinking Patterns, and Local Zoning Berkeley, Calif. Warren Winkelstein, Principal Investigator
 20. University of Texas, Department of Anthropology Community Culture: A Means of Primary Prevention Austin, Texas Douglas Foley, Principal Investigator

21. Utah Alcoholism Foundation The Cottage Program Salt Lake City, Utah Bernard Boswell, Principal Investigator
22. East Harlem Tenants Council Identity Development and Education for Adolescents New York, N.Y. Marilyn Aguirre, Principal Investigator
23. Michigan, State of: Substance Abuse Prevention Education (SAPE) is a program of eight statewide projects covering 70-75 percent of Michigan's K-12 public schools. Evaluation reports from 1976 to the present are available from Office of Substance Abuse Program Division, Michigan Department of Health, P.O. Box 30035, Lansing, Mich. 48909.
24. Pennsylvania, State of: Pennsylvania has adopted a nonspecific primary prevention approach to problems of drugs and alcohol, which uses State authority to fund local and county primary prevention proposals conforming to State licensure standards. Emphasis from the State level is upon planning and training, rather than upon direct funding of specific prevention projects. Approximately \$5 million in State support is available to assist county/local efforts, collect uniform data on prevention activities for State-level evaluation, provide inservice training particularly to intermediate public school service organizations, and provide technical assistance. 1980 is the first full year of operation for the Uniform Data Collection System, which will provide an evaluation base for planning for subsequent years. Contact: Division of Training and Prevention, Governor's Council on Drug and Alcohol Abuse, 2101 N. Front St., Harrisburg, Pa. 17120.

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Chapter 2

Drinking and Driving Programs

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Abstract

It is stated that society's familiarity with drinking, with driving, and with the two activities in combination, may have hindered the development of effective drinking-driving countermeasures, i.e., when one feels familiar with the elements of a problem, there is a tendency to let preconceived notions interfere with gathering, assimilating, and applying information. In this paper, current knowledge about the drinking-driving problem is examined, including what may be relevant to further efforts to ameliorate it. This examination is carried out in three parts: First, the costs that are generated by the drinking-driving problem are examined in terms of the magnitude and distribution of preventable costs. Second, information to date about countermeasure strategies for reducing the prevalence of drinking-driving are summarized. Third, efforts aimed at reducing the risk associated with a given amount of drinking-driving are examined. It is noted that this section offers few conclusions, but raises pertinent questions that warrant further investigation. The author recommends that persons involved in research and experimental design participate with those concerned with service provision and program management from the earliest planning and budgeting stages of drinking-driving countermeasure programs. Programs should not be labeled "demonstration projects" unless they are in fact demonstrating a countermeasure that the agency has ample reason to believe will be effective.

Introduction

Public concern over the dangers of drinking driving is almost as old as the automobile. Indeed, few authors on the subject can resist citing the "motor wagons" editorial in the *Quarterly Journal of Inebriety* in 1904. Despite the long history of concern and the many attempts at control, drinking driving is still a major problem.

Paradoxically, society's familiarity with drinking, driving, and their combination may have hindered the development of effective drinking-driving countermeasures. When someone feels familiar with the elements of a problem, he or she tends to let preconceived notions

interfere with gathering, assimilating, and applying information. This paper examines what is known about the drinking-driving problem and what may be relevant to further attempts to ameliorate it.

First, the costs generated by the drinking-driving problem are examined: which of these costs are potentially preventable and how are the magnitude and distribution of the preventable costs evaluated when assessing the importance of the drinking-driving problem.

Second, the information to date on countermeasure strategies for reducing the amount of drinking driving is summarized. Findings indicate some promising approaches and, equally important, some unpromising approaches that still have vocal advocates.

Third, efforts to reduce the risk associated with a given amount of drinking driving are examined. Because little experience with such efforts exists, this section offers few conclusions but raises pertinent questions that warrant further investigation.

The work on which this paper is based was performed for the Panel on Alternative Policies Affecting the Prevention of Alcohol Abuse and Alcoholism, of the National Academy of Sciences/National Research Council. Another account of this work is planned for inclusion in the Panel's Final Report.

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Finally, the manner in which the Federal Government has designed and managed drinking-driving countermeasure programs is detailed and evaluated.

Costs of the Drinking-Driving Problem: Implications for the Role of Government

Any attempt to ameliorate drinking-driving problems will consume scarce government resources and may impose monetary or non-monetary costs on people (e.g., some restriction of civil liberties). The costs generated by the problem, their magnitude and distribution, must be determined and then compared with the costs of potential solutions.

The question of costs is of more than academic interest. The Comptroller General of the United States (1979) reported that an estimated \$100 million was spent in 1976 by Federal, State, and local governments for their drinking-driver countermeasure activities. This extensive financial commitment and the high human and economic costs involved justify a debate on the proper priority of government efforts to reduce the costs of drinking driving.

Table 1. BAC Ranges of Accident-Involved Drivers and Control Group Drivers by Worst Consequence of Accident (in Percentages)¹

BAC	Fatal Vermont		Injury Huntsville, Ala.		Injury Grand Rapids, Mich.		Property Damage Grand Rapids, Mich.	
	1967-68		1974-75		1962-63		1962-63	
	Accident	Control	Accident	Control	Accident	Control	Accident	Control
<0.01 ²		64	84	73.98	88.18	81.83	89.01	83.8789.01
0.01-0.049		5	9	4.86	4.29	6.55	7.76	6.897.76
0.05-0.099				7.97	4.68	4.11	2.46	3.542.46
0.10-0.149		31	7	4.84	2.11			
>0.15				8.35		7.51	0.76	5.700.76

SOURCE: Grand Rapids, Mich.—Borkenstien et al. 1974; Huntsville, Ala.—Farris et al. 1976; Vermont—Perine et al. 1971. Using data from Sterling-Smith 1976, the reviewer adjusted the Vermont data, which reported BAC only for fatally injured drivers, to reflect drivers in all fatal accidents. (Data from other studies were interpolated into uniform BAC categories. Appendices A and B, describing data selection and adjustment, can be obtained from the author).

¹ BACs less than 0.01 percent are effectively equal to zero.

² The minimum BAC at which it is illegal to drive in most States is 0.10 percent.

Preventable Accidents

Information on drinking driving presented to policymakers typically has expressed the importance of the problem in terms of the costs *associated* with it (Comptroller General of the United States 1979; U.S. Department of Health, Education, and Welfare 1978; U.S. Department of Transportation 1968). For example, the *Third Special Report on Alcohol and Health* noted that "approximately one-third of the . . . injuries and one-half of the fatalities [from traffic accidents] are alcohol related" (U.S. Department of Health, Education, and Welfare 1978, p. 61). The term *alcohol related* refers to any accident in which a driver, or sometimes any person involved in the accident, has a positive blood alcohol concentration (BAC).

Clearly, a better indication of the importance of solving a problem would be the costs that would be *eliminated* if the problem were solved. The maximum preventable costs of drinking driving can be determined by first examining the BACs of drivers involved in various types of accidents and the BACs of drivers selected at random at times and places similar to those of the accidents. (See table 1.) Table 1 shows that the BACs of drivers involved in more serious accidents are generally higher than those of drivers involved in less serious accidents. The distribution of BACs among the accident-involved drivers and the control group drivers can then be used to compute how many accidents would be avoided if all driving were done at the risk level associated with the lowest BAC range—that is, the number of accidents that would be prevented by a "perfect" drinking-driving countermeasure (see table 2).

Table 2. Expected Reduction in Motor Vehicle Traffic Accidents if All Drivers Had Zero BAC

Type of Accident Place, and Time of Study	Expected Reduction (in percent)
Fatal Vermont, 1967-68	23.7
Injury Huntsville, Ala., 1974-75	15.8
Injury Grand Rapids, Mich., 1962-63	8.2
Property damage Grand Rapids, Mich., 1962-63	5.7

SOURCE: Bayesian analysis of table 1 *supra*. Appendix C, describing the analysis, can be obtained from the author. See also Hurst 1970, 1973.

Because the accident reduction figures are based on the association between BAC and accident involvement, it must be determined whether any other factors, correlated with both BAC while driving and accident risk, are confounding the analysis. In fact, two confounding factors appear to be biasing the results in opposite directions.

First, strong evidence indicates that greater drinking frequency is positively associated with more frequent drunk driving and *negatively* associated with accident risk at any given BAC (Borkenstein et al. 1974; Hurst 1973). The risk of accident computed from the Grand Rapids, Mich., and Vermont data is actually lower for the 0.01-0.049 BAC range than for the 0.01 category. The correlations with drinking frequency bias the figures toward underestimating the accident reduction of a perfect countermeasure because those who drive drunk, if sober, would have a *lower* accident risk than those who currently drive sober.

The second bias results from disputed but likely positive associations between "problem drinking," or "alcoholism," and both drunk driving and accident risk while sober (U.S. Department of Health, Education, and Welfare 1978; Smart 1969). This bias would result in those who now drive drunk, as a group, having higher accident risk than the general driving population even if they were prevented from driving with positive BACs.

A last caution—the maximum achievable accident reduction figures are based on samples at specific times and places. Their validity for the Nation as a whole is not assured. It is heartening that the Huntsville, Ala., and Grand Rapids, Mich., studies of injury accidents, despite their spatial and temporal separation, yield reduction estimates within 8 percentage points of each other. The Vermont data on distribution of killed drivers across BAC ranges are in strong agreement with several other studies of driver fatalities (Jones and Joscelyn 1978; U.S. Department of Health, Education, and Welfare 1978). Unfortunately, accident reduction estimates could not be produced from these other studies because they lacked control groups. Besides the Grand Rapids study, no analyses of property-damage-only crashes have been found.

Magnitude of Preventable Costs

The accident reduction figures can roughly be converted into savings in terms of lives, injuries, and dollars of property damage. In 1977, motor vehicle traffic accidents resulted in 49,500 deaths, 1.9 million disabling injuries, and \$15.5 billion of property damage in the United States (National Safety Council 1978). (The \$15.5 billion figure is based on \$520 per accident-involved vehicle, according to the National Highway Traffic Safety Administration [Jones and Joscelyn 1978].) Multiplying these figures by the percentages of accident reductions in table 2 yields *maximum achievable savings in 1977 of 11,700 deaths, 156,000-300,000 disabling injuries, and \$963 million in property damage* (based on the total reduction in accident-involved vehicles).

Of course, these figures must be interpreted with care. The figures in table 2 refer to reductions in the number of accidents, not directly to reductions in the consequences of accidents. For instance, alcohol-related accidents more frequently involve only a single car and driver than do accidents in general (Borkenstein et al. 1974; U.S. Department of Health, Education, and Welfare 1978). Therefore, the reduction in the number of people killed, number of people injured, and number of cars damaged will be less than the reduction in number of accidents. It is also probably true, however, that the severity of injury and damage in the alcohol-related accidents prevented will be greater than the severity of injury and damage in accidents in general. Thus, only in the case of fatalities do the figures above clearly overstate potential savings from drunk-driving countermeasures.

It is beyond the scope of this paper to develop preventable cost estimates for all other problems whose amelioration might compete with drunk-driving countermeasures for government resources. The data in table 3 provide some perspective, however. In table 3, it is assumed that deaths in alcohol-related traffic accidents equal 50 percent of all traffic accident deaths (Comptroller General of the United States 1979; U.S. Department of Health, Education, and Welfare 1978) and that traffic accident deaths preventable with a perfect drinking-driving countermeasure equal 23.7 percent of all traffic accident deaths (see table 2).

Table 3. Death From Alcohol-Related Motor Vehicle Traffic Accidents and Deaths Potentially Preventable by Drinking-Driving Countermeasures, as Percentages of Various Categories of Deaths in 1977

Cause of Death	Related to Drinking-Driving (in percent)	Preventable by Drinking-Driving Countermeasures (in percent)
Alcohol-related motor vehicle traffic accidents	100	47
Motor vehicle traffic accidents	50	24
Accidents	22	10
All causes except cardio- vascular diseases and malignancies	4	2
All causes	1	0

SOURCE: Deaths from each cause were projected from data from the U.S. Bureau of the Census 1978.

In considering table 3, one should realize that deaths from traffic accidents, and particularly from alcohol-related traffic accidents, are typically at an earlier age than deaths from other major causes such as degenerative diseases. For example, in their sample of drivers killed in accidents, Perrine et al. (1971) reported that 47 percent were under age 30 and that 49 percent of those with positive BACs were under age 30.

This reviewer has estimated that 61-78 percent of all persons killed in drinking-driver traffic accidents are drivers with positive BACs. How should the deaths of drinking drivers themselves versus the deaths of "innocent victims" of drunk-driving accidents be weighted? On the one hand, the drunk driver may be viewed as responsible for putting himself or herself in danger. On the other hand, we may wish government to intercede to prevent a person's momentary lapse of judgment from jeopardizing his or her life. One study reported that 75 percent of drivers admit to driving after drinking at least occasionally (U.S. Department of Transportation 1968). All these people are at risk of misjudging their limits on one occasion and becoming a drunk driver. In setting government priorities, consideration should be given to the costs imposed on friends, loved ones, dependents, and the economy by the death or injury of someone driving while intoxicated. In the final analysis, the proper weight to give to deaths of drunk drivers for policy-setting purposes cannot be determined by empirical or logical analysis (although these may inform the decision).

Table 4. Expected Reduction in Motor Vehicle Traffic Accidents and Costs as a Result of Preventing All Drunk Driving by Persons With Previous DWI Arrests

Type of Accident, Place, and Time of Study	Expected U.S. Reduction in 1977	
	Percent	Type
Fatal Vermont, 1967-68	2.4	1,188 lives
Injury Huntsville, Ala., 1974-75	2.4	45,600 injuries
Injury Grand Rapids, Mich., 1962-63	1.2	22,800 injuries
Property damage Grand Rapids, Mich., 1962-63	1.1	\$171 million

The foregoing analysis indicates that drinking-driving countermeasure programs can be legitimate and useful government actions. However, even if such countermeasures were perfectly successful, the savings in lives, injuries, and property would be less than widely quoted figures would lead one to believe. The rest of this paper discusses the value of various countermeasures.

Exposure Reduction

The first drinking-driving countermeasure strategy that occurs to most people is exposure reduction—reducing the amount of drinking driving, thereby reducing accident costs. This section examines several potential ways to achieve exposure reduction: general deterrence, recidivism reduction (specific deterrence), third-party intervention, changing the minimum legal drinking age, screening the driving population for those most likely to drive drunk, installing detection devices in vehicles, and providing alternative transportation.

General Deterrence

General deterrence refers to countermeasures that attempt to prevent drivers in general from combining driving with drinking in excess of legally proscribed limits (0.10 percent BAC in most States).

Risk of Punishment

The most effective general deterrence countermeasure programs are those that raise drivers' perceived risk of arrest and punishment for drunk driving. Two examples are the British Road Safety Act of 1967 (Cameron 1978) and similar legislation passed in Canada in 1969 (Robertson 1977). In both cases, the law provided for breath testing and penalties for having a BAC above 0.08 percent or for refusing to take the test.

For the British program, which was more widely publicized, Ross (1973) reported that casualties were down 16 percent and fatalities 23 percent the first 3 months after the Act's passage. The percentage of fatally injured drivers with BACs ≥ 0.08 percent dropped from 27

percent to 17 percent the following year (Comptroller General of the United States 1979). Ross (1973) noted, however, that the results were temporary and probably due to the wide publicity the laws received. He suggested that potential drunk drivers were at first deterred by the threat of arrest and punishment but that eventually they realized that enforcement of the Act was slack and that risk of arrest was not really high. This realization caused an "evaporation" of the Act's deterrent effect. In September 1975, the Cheshire County Police seemed to recapture the Road Safety Act's deterrent effect through a publicized policy of administering breath tests to all drivers pulled over for violations or involved in accidents during "drinking hours." The resulting accident reduction "evaporated" a month after the policy came to a publicized end (Ross 1977).

In Canada, similar legislation resulted in a reduction of 8 percent in traffic fatalities, which also proved temporary (Robertson 1977). There are alternatives to the "evaporation" theory. Since Ross' study, the incidence of illegally high BAC among drivers killed in Britain has continued to climb, until it now substantially exceeds the incidence before passage of the Act. Mere evaporation of the Act's deterrent effect cannot account for this. There must be some other factor(s) strengthening the association between BAC and driver fatalities over time. It is not known how much of what Ross observed was due to "evaporation" and how much was the result of unidentified factor(s). Despite this, the "evaporation" theory is still attractive as a partial explanation.

Unfortunately, the only agreed-upon success in the United States similar to the British Road Safety Act was a 1-year countermeasure program at Lackland Air Force Base in Texas in 1959. While the program achieved "a statistically significant decrease of 50% to 60% in the number and rate of accidents, driver injuries, and other injuries during the operational period" (Cameron 1978, p. 23), it is not clear how applicable this experience is to a civilian population.

A recent study of drinking-driving countermeasures by the General Accounting Office (Comptroller General of the United States 1979) examined six States indepth: California, Georgia, Louisiana, Minnesota, New York, and Washington. Five of these States were operating some police patrols targeted at drinking drivers, four of the five reported increased DWI arrests, and two (Washington and Minnesota) reported evaluations of the patrol's effect on accident rates. In King County, Wash., a "drinking-driver emphasis patrol" was operated as part of the federally funded Alcohol Safety Action Project (ASAP). Evaluation of this program failed to find a change in accident fatalities or injuries

resulting from the patrol, although DWI arrests had increased. The evaluation of the Hennepin County, Minn., ASAP emphasis patrols found that "alcohol involvement in fatal crashes was reduced from 63 percent in 1972 to 38 percent in 1976" (p. 22). Even without a control group, this finding is highly suggestive of success.

Current knowledge indicates that when a driver's perceived risk of arrest and punishment for drunk driving is sufficiently raised, drunk driving is deterred and accidents are reduced. However, to sustain a high perceived risk of arrest and punishment, the actual risk must be set high and kept high.

Ways to increase arrest risk include targeting patrols by day of week, time, and geographic location; making breath tests for alcohol easier to administer from both legal and technological standpoints; simplifying the process for making a DWI arrest; and providing police with the motivation to make such arrests.

What must be determined are what levels of risk are necessary to achieve various degrees of deterrence and what it would cost to bring about such increases in risk. These questions appear to require empirical study.

Severity of Punishment

If increasing the risk of punishment can deter drinking driving, then what about increasing the severity of punishment? At first glance it seems cheaper and easier to hand out stiffer penalties to convicted drinking drivers than to beef up enforcement.

The Scandinavian drunk-driving laws, which impose harsh penalties, are widely reputed to be effective deterrents, and there is anecdotal evidence to support this reputation. But during a 3-month study in Scandinavia, Ross (1975) was unable to find any scientific evidence that the laws had deterrent effects. He then performed time-series analyses of drunk driving and traffic casualty measures in Sweden, Norway, and Finland. In no case did these measures change systematically with changes in drunk-driving laws so as to indicate a causal relationship. We must look elsewhere to try to assess the potential of deterrence through severe punishment.

For 7 months in 1970 and 1971, "magistrates in Chicago's traffic courts were directed by the supervising judge to sentence persons convicted of . . . DWI to seven days in jail and to recommend. . . that such drivers' licenses be suspended for one year. The policy was publicly announced and widely publicized" (Robertson et al. 1973, p. 57). Although motor vehicle fatalities decreased during the countermeasure period, evaluators concluded that the decrease was not statistically significant compared with variations during the preceding 5 years; and they noted a similar decline during the countermeasure period in another, similar city without such a program.

The failure of the Chicago program might be attributed to a frequently identified pitfall of the severe punishment approach: judges, juries, and even police and prosecutors are thought to be reluctant to subject DWI offenders to severe punishment. It is unknown how frequently the judges actually complied with the supervising judge's instructions to give 7-day jail sentences for DWI. Although DWI arrest levels did not change significantly, there was a decrease in the number of convictions, which was accounted for by a decrease in the conviction rate for defendants who did not undergo a test for alcohol after arrest. "[This decrease] appears to be a result of changes in plea bargaining or reluctance of judges or juries to convict and sentence to seven days in jail those drivers for whom objective evidence of impairment was not available" (Robertson et al. 1973, p. 66).

Up to 75 percent of U.S. drivers admit to driving after drinking at least occasionally (U.S. Department of Transportation 1968). So most people do not view driving after drinking as very deviant behavior. Because of this attitude, it is doubtful how often severe penalties will be applied even if they are authorized by law. Severe penalties may thus result in fewer arrests, fewer convictions, and more plea bargaining.

Even if judges and juries could be educated to hand out severe sentences for DWIs, there is a question of how severe a penalty society is willing to levy for this crime. A 7-day jail sentence may not be severe enough to achieve significantly more deterrence than the same risk of license suspension. It simply is not known what combinations of risk and penalty will achieve deterrence.

Another factor to consider is the cost of enforcing severe penalties: the length of trials and number of appeals would be likely to increase (assuming the penalties are not circumvented by plea bargaining), thus further crowding the Nation's choked court system. If penalties were to include imprisonment, then the cost of a massive addition to the country's prison population must be added in.

Public Information and Education

The third approach to achieving general deterrence is public information and education (PI&E). Is a massive effort to change social attitudes about drinking and driving necessary? Would it be productive?

There are three approaches for using PI&E to achieve general deterrence. The first is to inform potential drunk drivers of the risks they face—accident and arrest—if they drive while drunk. The potential effectiveness of this approach is dubious, since it appears that the public is quite familiar with these risks (Cameron 1978; Hawkins et al. 1976; Wilde et al. 1975). A PI&E campaign that would merely repeat what is generally known, or fill in small details, would be unlikely to cause much change in drinking-driving behavior.

The second approach is to use PI&E to try to alter potential drunk drivers' attitudes rather than provide them with information, that is, to alter their own norms and standards of behavior so as to make drunk driving less likely. As pointed out, norms concerning substance use are set and reinforced by a person's entire social environment, including family and peer group. An advertising campaign advocating conflicting norms would likely be too weak a stimulus to have much effect and may be rejected out of hand as an attack on the groups the person identifies with.

The third approach is to use PI&E to provide potential drunk drivers with information that will make it easier for them to avoid driving while dangerously or illegally drunk. Such information might include simple rules of thumb for determining how many drinks a person with a given body weight can drink on a full or empty stomach before reaching 0.10 percent BAC, simple sobriety tests one might give oneself, or socially and economically acceptable alternatives to driving home when someone has had too much to drink. Of course, such a campaign would hinge on the existence of such rules of thumb, tests, and alternatives.

Attempts to achieve general deterrence of drunk driving through PI&E have generally employed the first two approaches—describing the risks of drunk driving and trying to form attitudes against it. Although there have been many such campaigns, only a relatively small number have been subjected to a scientific evaluation of their impact on drinking-driving behavior and none has been shown to prevent accidents (Jones and Joscelyn 1978; Organisation for Economic Co-operation and Development 1978; Wilde 1971).

A recent General Accounting Office report (Comptroller General of the United States 1979) urged the Federal Government to launch "a massive effort to start changing social attitudes about drinking and driving." It appears that this effort would be a poor allocation of resources. However, if there is information that would help people avoid driving when dangerously or illegally drunk, without radically changing their values and social behavior, then disseminating such information would be a useful countermeasure.

Recidivism Reduction

Maximum Potential Savings

The potential reduction in traffic accidents obtainable through DWI recidivism reduction is sharply limited by the small number of persons

with previous DWI arrests among drivers involved in accidents while driving with a positive BAC. Sterling-Smith (1976) reported that, of drivers responsible for fatal accidents in the Boston area during the early 1970s, 4 percent had a previous DWI arrest and 39 percent had a BAC exceeding 0.05 percent at the time of the accident. Thus, no more than 10 percent (i.e., 4 percent/39 percent) of "drunk" drivers responsible for fatal crashes would have had a previous DWI arrest. In fact, if all persons with drunk-driving arrests were prevented from ever combining drinking and driving again, the reduction in motor vehicle traffic accidents would only be about 1-3 percent, although absolute cost savings would be nontrivial.

Hurst (1973) suggested that those who often mix drinking and driving drive in a slow, cautious, but erratic manner that reduces their chances of serious accident compared with other drivers with the same BAC but with less drinking-driving experience. This manner of driving would probably increase the chance of less serious accidents and arrest. If true, drunk drivers with previous DWI arrests would be expected to be more heavily represented among drivers in less serious accidents than in fatal accidents.

This expectation is borne out in data reported by Waller (U.S. Department of Transportation 1968): of male drivers in crashes involving alcohol or hit-and-run, 20 percent had one or more previous arrests for DWI. Based on the Sterling-Smith and Waller findings, drivers with previous DWI arrests can be estimated to comprise 10 percent of all alcohol-influenced drivers in fatal accidents, 15 percent in injury accidents, and 20 percent in property-damage-only accidents.

Multiplying these estimates by the figures from table 2 for the percent of accidents that would be prevented if all drunk driving were eliminated, and the resulting cost savings in 1975, yields estimates of the savings if all drunk driving by persons with previous DWI arrests were eliminated, that is, the savings from a "perfect" recidivism reduction countermeasure. The results are shown in table 4.

Of course, if the risk of arrest for drunk driving increased, so would the percentage of accident-involved drunk drivers with previous DWI arrests. Thus, increased risk of arrest would raise the potential savings from DWI recidivism reduction.

Effectiveness of Treatments

What is the best way to treat persons arrested for DWI? Possible treatments fall into two categories. The first is punitive, involving treatments such as fines, imprisonment, license suspension and revocation, and license restriction (e.g., allowing driving only to and from work). Many "punitive" treatments are also prophylactic, in that they temporarily or permanently restrict the subject's opportunity to drive drunk again. The second type of treatment is educational/therapeutic, including treatments such as "drinking-driver schools," group therapy, and treatment for general alcohol abuse.

In general, educational/therapeutic treatment is more expensive than punitive treatment but not necessarily more effective in preventing accidents. A review of relevant literature (Comptroller General of the United States 1979; Jones and Joscelyn 1978; Nichols et al. 1978; Organisation for Economic Cooperation and Development 1978; Preusser et al. 1976; U.S. Department of Transportation 1979a) yielded the following observations:

- No credible evaluation has shown that any educational/therapeutic treatment reduces future accidents of a person arrested for DWI more than traditional punitive treatment does (although at least two studies of intensive treatment for general alcohol abuse showed a decline in the future incidence of accidents and re-arrests combined [Organisation for Economic Co-operation and Development 1978]).
- Some evaluations have reported a decrease in DWI re-arrest rate due to educational/therapeutic treatment, but such reports appear to vary inversely with the scientific rigor of the evaluation. Even where an improvement is reported, it is small. Aggregate data from the ASAP program report that for DWI arrestees classified as “social drinkers”—the group found to be most responsive to educational/therapeutic treatments—such treatments are associated with less than a 15 percent increase in the number of persons not re-arrested for DWI within 3 years (Nichols et al. 1978).
- Although DWI arrestees classified as “problem drinkers” (including “alcoholics”) have been shown to be less responsive than “social drinkers” to educational/therapeutic treatment in general, they appear to be more responsive to personalized and interactive treatment than to formal treatment, and more responsive to programs classified as therapeutic than to those classified as educational. These differences are not apparent when treating “social drinkers” (Nichols et al. 1978).

A record of poor past performance does not preclude future success, but the burden seems to lie on the advocate of any particular educational/therapeutic treatment program to show reason to believe it will cause greater recidivism reduction than the cheaper punitive approach.

Third-Party Intervention

The potential of third-party intervention obviously hinges on what fraction of accident-involved drunk drivers were drinking and/or driving in the presence of others before their accidents. Unfortunately, this information does not seem to be available. It seems reasonable to assume, however, that a large fraction of drunk drivers, perhaps a majority, were drinking in the presence of other persons before driving.

Servers and fellow guests or patrons can take various steps to reduce drunk driving, such as:

- Making it less convenient or less socially acceptable for a guest/patron to drink to intoxication;
- Suggesting that intoxicated guests/patrons "sober up" before driving or allow a friend or taxi to take them home;
- Physically restraining or reporting to police an intoxicated guest/patron who insists on driving.

All of these steps impose some costs on the third party: reduction in profit or apparent hospitality, the expense or inconvenience of arranging alternative transportation or lodging for the inebriate, or the unpleasantness of telling a person that he or she is for the moment unable to drive. The problem, then, is how to persuade third parties to bear these costs.

PI&E campaigns have been used to try to increase third-party intervention. These campaigns face the same difficulties as those attempting general deterrence: no truthful information that could be provided is likely to have much impact on the third party's perception of the risk inherent in drunk driving by others because current perceptions appear to be fairly accurate. Moreover, a media campaign may not have sufficient persuasive force to alter social behavior that is reinforced by groups important to the individual.

The other way to cause third parties to intervene in potential drunk-driving situations is to impose legal liability on them. Such liability may be imposed by statute (referred to as a "dram shop law") or by court interpretation of common law. According to Mosher (1979), 18 States have dram shop acts. These statutes usually state that a commercial seller of alcoholic beverages is liable for injuries caused by his or her patrons if the server sells or gives alcoholic beverages to a patron who is underage, a habitual drunkard, or obviously intoxicated. "Courts in ten states without dram shop acts, five states with such acts, and the District of Columbia have imposed civil liability on commercial servers of alcoholic beverages by court decision . . . based on the server's alleged negligence" (p. 8).

State laws vary as to whether the drunk driver can sue a third party who contributed to his or her intoxication (Mosher 1979). In general, liability is imposed on "social hosts" only when an underage person is served. Court decisions in Iowa and California stating that social hosts were liable if they served "obviously intoxicated" guests were quickly followed by legislation in each State overturning the decision. In the only case where the question arose, a California court decided that a person who merely encourages another to drink, without furnishing him with alcohol, is not liable.

Does third-party liability motivate those susceptible to it, mostly commercial servers, to take steps to prevent drunk driving by their patrons? The criteria for judging liability do not encourage servers to take precautions. Servers are considered liable if they serve an underage or "obviously intoxicated" person, and if that person subsequently does damage. The fact that the server took reasonable precautions to avoid serving such persons or to prevent those served

from doing damage is not a valid defense (Mosher 1979). If a patron or guest leaves and does damage, and if a court decides post hoc that he or she was "obviously intoxicated" when served, then the case is decided against the server. Because there is no standard of practice which, if adhered to, would absolve the server of responsibility, servers tend to view dram shop liability as a random risk and insure against it rather than altering their serving practices. (Insurance premiums increased from 500 percent to 1000 percent for commercial servers in California in the wake of a court decision imposing liability on them. Insurance rates for relatively small chains of on-sale premises reached \$100,000 per year [Mosher 1979].) Standards of practice for servers that would reduce the risk of drunk driving should be developed and disseminated. Courts and legislatures should be encouraged to absolve servers who follow these standards of liability for damage done by patrons who drive drunk despite the server's efforts.

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Drinking Age

Persons under a given age are routinely prohibited from purchasing or consuming alcohol. Throughout the United States, the minimum drinking age ranges from 18 to 21 years. It is probably unrealistic to consider setting a minimum drinking age outside this range, but the question remains, what age within this range is optimal?

It is clear from several studies that where the drinking age is lowered from 21 or 20 to 18, the number of accidents involving 18-, 19-, and 20-year-old drivers increases (Comptroller General of the United States 1979; Haddon 1979; Organisation for Economic Co-operation and Development 1978; Scotch 1979). Various studies have found the increase to range from undetectable to 26 percent.

The fact that prohibiting 18- to 20-year-olds from drinking reduces their accident involvement does not in itself make a convincing argument for setting the drinking age at 21. After all, prohibiting persons of any age group from drinking would probably reduce their accident involvement. What is the basis for deciding that persons who are old enough to drive, vote, and enter into contracts may not be adults?

A possible justification is that accident risk rises more quickly with BAC for drivers under 21 than for any other age group (Jones and Joscelyn 1978). It is unclear, however, to what degree this is merely because younger drivers tend to be less experienced at drinking and drinking driving. Those who drink more often are at less risk at any given BAC. To the degree that the association between age and sensitivity to BAC is due to lack of drinking experience, raising the drinking age will merely transfer high accident risk from drivers under age 20 to those recently turned 21.

Screening

Screening drivers for those most likely to drive drunk and targeting countermeasures to them as individuals has received little attention. In a pilot study for a proposed screening project in Washington, D.C., drivers renewing their licenses during 1976 were asked to voluntarily, and anonymously, take part of a widely used test for present or prospective alcohol abuse. The test took less than 15 minutes to complete and consisted of a series of yes/no and true/false questions. Many people considered the questions, some of which dealt with the driver's income, relationship with spouse, and arrest and drinking-driving history, to be too personal for a motor vehicle licensing agency to ask.

Despite the fact that the test had been given only on a voluntary and anonymous basis, press coverage, citizens' complaints, and protests by the Washington, D.C., ACLU led the mayor to suspend the project and eventually to order the program aborted and all data destroyed (*Washington Post*, August 5, 7, 31, and December 22, 1976).

Mass screenings involve two basic problems:

- The screening device. The screening test or procedure must use only that information considered proper for licensing authorities to examine, for example, convictions for drinking driving and other alcohol-related offenses. The screening device must produce a low level of false positive errors in order not to inconvenience or stigmatize persons who do not have drinking problems.
- The treatment of persons identified by the screening. If the screening device tests for *potential* drunk drivers, then some sort of "alcohol education" or other preventive measure may work. If it tests for *actual* drinking drivers, then the problem is the same as for recidivism reduction.

A program in North Carolina screened driver license records to identify "habitual offenders" based on past traffic convictions (Li and Waller 1976). Many of the "habitual offenders" were drinking drivers. Despite a law authorizing 5-year license revocations for the habitual offenders, 62 percent of the referrals from the screening program were never acted on by prosecutors. The screening program was widely viewed as superfluous, because there was opportunity to impose similar sanctions on "habitual offenders" when they were brought to court for a particular offense. This may be a generic weakness of screening programs based on public record information.

The screening approach seems to have little potential in the near future.

Detection Devices in Vehicles

Should cars be equipped with devices to detect alcohol-influenced drivers and either prevent them from starting the car or make them very conspicuous on the road, for example, by flashing the headlights? Such a device could be installed on all cars, or only on those cars driven by

persons who seem likely to drive after drinking (e.g., persons with previous DWI convictions).

First, any such device could be bypassed, either removed or rendered inoperative. Second, both types of detectors that have been developed—a breath alcohol analyzer and a skill tester—are more or less susceptible to being fooled by having a sober companion take the “test” for the drinking driver. Although these detection devices can be defeated, they still may be of use because they require the driver to admit that he or she is too drunk to drive.

The widespread installation of detection devices in vehicles may meet hostile public reaction, because even those who would never wish to drive drunk are likely to oppose the inconvenience and the added expense. The inconvenience and expense would be most easily justified in the case of installing detectors on the cars of persons with previous DWI convictions because they are thought to be more likely to drive drunk in the future (Jones and Joscelyn 1978).

Alternative Transportation

Providing public transportation for the intoxicated person seems a promising alternative, especially on occasions of heavy drinking such as New Year’s Eve. No evaluation of alternative transportation programs as drunk-driving countermeasures is available, so nothing specific can be said regarding this strategy’s effectiveness and efficiency. An experiment conducted in an area with a good mass transit system would be enlightening and probably not very expensive.

Risk Reduction

Perverse Incentives

Risk reduction refers to lowering the expected cost, in terms of deaths, injuries, and property damage, of each unit of drunk driving. A possible objection to risk reduction is that as drunk driving becomes safer, people will engage in it to a greater extent.

The question resolves to estimating the “risk elasticity of drinking driving.” If a 1 percent decrease in the risk of drunk driving leads to a 1 percent increase in the amount of drunk driving (i.e., if elasticity equals 1), then our efforts would be worthless. The total costs resulting from drunk driving would remain the same. Conceivably, the elasticity may be greater than 1; that is, a decrease in risk may lead to a greater increase in exposure, so that total costs from drunk driving would increase.

This reviewer suggests that the elasticity is less than 1; that when the adverse consequences of an act are both improbable and so serious that they are painful to contemplate (e.g., a serious accident resulting from drunk driving), a person will tend to evaluate the risk at less than its expected cost and will be insensitive to small changes in the expected

cost. This would explain why drivers seemed to be no more effectively deterred from drunk driving by the threat of a jail sentence than of a license suspension (Robertson et al. 1973). The probability of being subjected to either penalty was quite small, and both penalties were so serious that one would be tempted to think "that couldn't happen to me."

If this speculation is accurate, then changes in the risk of drinking driving brought about by risk-reducing measures would not have a large impact on the amount of drunk driving and would result in a reduction of total costs resulting from drunk driving (net of the cost of bringing about the risk reduction). Of course, this is only speculation, but it could be tested experimentally if the amount of drunk driving in an area were measured before and after a quick and significant reduction in the risk of drinking driving.

Generally Applied Risk Reduction

Some risk reduction measures are applied to drivers in general. They may be differentially more (or less) effective in lowering the risk of drivers with elevated BACs, but implementing the measures does not require knowing which drivers are likely to be impaired. Passive restraint systems, for instance (such as air bags or automatic seatbelts), would protect vehicle occupants whether or not alcohol was involved in the crash, but they would be differentially effective in protecting accident-involved drunk drivers because they are less likely to use conventional seatbelts than are accident-involved drivers in general (Sterling-Smith 1976). The same is true of other attempts to make vehicles in general more crashworthy. Other changes in the driving environment would reduce the probability of accident or the probable severity of accidents for all drivers while having a differentially greater effect on drinking drivers. For example, the ability to divide attention between tasks has been found to be one of the driving-related skills degraded first and most severely as BAC increases (U.S. Department of Transportation 1968). Therefore, speed governors in cars, redesigned road markings, and other changes in the driving environment that reduce the driver's need to shift attention frequently would probably result in greater risk reduction among drinking drivers than drivers in general.

Some generally applied risk reduction measures would benefit only those persons with an elevated BAC. Haddon and Baker (1979) pointed out that "injured people are rarely tested for alcohol in emergency rooms although symptoms, diagnoses, response to drugs and anesthesia, and even prognosis may be influenced by alcohol" (p. 16). Informal consultation with physicians experienced in emergency room work suggests that physicians do not routinely test accident victims for alcohol, relying on cues such as breath odor, drunken behavior, and unaccounted-for unconsciousness to warn them of possible alcohol involvement. William Haddon, M.D., of the Insurance Institute for Highway Safety, has suggested that medical personnel may be

reluctant to test for alcohol partly because doing so might involve them in litigation concerning the accident in which the patient was injured.

It is certainly not clear *prima facie* whether the incremental improvement in medical care resulting from more frequent tests for alcohol would be worth the expense of such testing. It might be found that testing some subgroups of accident victims, such as those injured in nighttime traffic accidents, is cost-effective.

All measures to reduce the risks of drinking driving (as opposed to the amount of drinking driving), even measures that offer no protection to persons with zero BACs, should be evaluated and assigned priority in comparison with all proposed measures to reduce the risk of driving in general. In a world of limited resources there is no defense for spending a dollar to reduce alcohol-related accidents if the same expenditure would be more effectively applied to reducing motor vehicle traffic accidents in general.

It is important that government agencies choosing among motor vehicle traffic safety measures evaluate their benefits in a way that recognizes the minority of drunk drivers on the road and their differential sensitivity to some safety measures. This will promote the efficient mix of alcohol-specific and nonalcohol-specific risk reduction.

Specifically Applied Risk Reduction

Some measures to reduce the risk of drinking driving may be uneconomical or impractical to apply to drivers in general but cost-effective and practical when applied specifically to drivers with a higher than normal probability of driving with an elevated BAC. Some modifications to improve a vehicle's crashworthiness or ease of driving may be cost-effective only when applied to the vehicles of persons with previous drunk-driving arrests, persons requesting drinking-driving safety devices for their cars, or persons willing to buy such protection.

It is in the case of specifically applied risk reduction that the problem of political acceptability may be greatest. For instance, one of the obvious effects of drinking is drowsiness, and it is known that drowsiness impairs driving ability, yet public information and education campaigns from government and private sources consistently omit suggestions such as taking caffeine, driving with the window open, or playing the radio when driving after drinking. (Although it is frequently and accurately pointed out that coffee does not reverse the intoxicating effects of alcohol.) Presumably, such suggestions are omitted because they could be perceived as encouraging drunk driving by lowering its expected cost. There does not appear to be empirical evidence on whether a driver with elevated BAC has less accident risk with or without antidrowsiness measures, and the answer is not clear *a priori* (e.g., is a more awake drunk driver also more reckless?). Such questions are not even asked when the problem of perverse incentives is viewed as a moral issue rather than as an issue of effectiveness.

Recommendations and Findings

Reducing the risk associated with drinking driving would tend to increase the amount of drinking driving that is done. I speculate that the "risk elasticity of drinking driving" is less than 1, meaning that a decrease in risk is likely to bring about a lesser increase in exposure, resulting in a net reduction in accidents.

Risk-reducing measures that affect drinking drivers and drivers in general by the same mechanism are best considered in the context of general traffic safety. Those people concerned with alcohol-related problems should verify that the procedures used by traffic safety authorities to select countermeasures accurately take into account differential impacts on drinking drivers. (For example, drinking drivers use seatbelts less often than drivers in general.)

To the extent that general traffic safety measures are successful, they will reduce the accident reduction attributable to drinking-driving countermeasures. The extent of the drinking-driver problem should be reviewed periodically to determine if extensive countermeasures are still warranted. Research should be performed to determine whether it would be cost-effective for emergency medical care personnel to test more traffic accident victims for blood alcohol.

Alcohol affects particular skills important to driving. It may be possible to redesign portions of the driving environment to decrease the impact on accident risk of degradation of these skills.

Cars driven by persons likely to drive drunk, such as those with previous DWI convictions, could be held to higher standards of crashworthiness than cars in general. This might be counterproductive if drivers of such cars become overconfident. Also, public reaction to such a plan may be hostile.

Government Action Toward Drinking Driving

In spite of the large reduction in deaths, injuries, and property damage that could be achieved by effective drinking-driving countermeasures, no technology exists to bring about these savings. As discussed in previous sections, a consideration of possible countermeasures raises more questions than it answers. In the case of risk-reducing countermeasures, where there is little experience to draw on, this ignorance, though regrettable, is understandable. But there have been many applications of exposure-reducing countermeasures, and despite this experience, no dependable and effective techniques have been developed. We must begin to learn from experience.

The Institutional Bias Against Learning

Cameron (1978) observed that "Only a small proportion of drinking-driving programs in the U.S. have ever been subjected to a scientific

evaluation of their effectiveness in reducing alcohol-traffic problems. In fact, much of what is known about the effectiveness of some types of drinking-driving countermeasures is based primarily on data from other countries" (p. 11).

As an example of evaluation problems, consider the Alcohol Safety Action Project (ASAP) program. The program consisted of 35 local ASAPs, each about 3.5 years in duration, funded by the U.S. Department of Transportation between 1969 and 1975 at a cost to the Federal Government exceeding 88 million dollars (U.S. Department of Transportation 1979*b*). Each ASAP attempted to integrate and improve enforcement, prosecution, screening, and treatment countermeasures to reduce drinking driving and associated accidents in its area.

The ASAP program design did not facilitate evaluation of its effectiveness as a drinking-driving countermeasure. Zimring's critique (1977) and the Department of Transportation's reports on the program (U.S. Department of Transportation 1979*a,b*) reveal several important flaws:

- Incomparable sites: "The original [8] grantees included four cities, one 'twin city' site, two counties, and the state of Wisconsin" (Zimring 1977).
- Inadequate control sites: Control sites for comparison with the ASAP sites were not selected until the projects had ended operation. This delay restricted potential control sites to the relatively few localities that happened to have kept sufficient accident records for comparison with ASAPs.
- Proliferation instead of replication: The program expanded to 35 projects before the initial 8 had been completed and analyzed, thus precluding evaluation problems from being detected in time and corrected in the later projects.
- Overaggregated evaluation: Evaluation focused on the change in accident occurrence at each ASAP site during the entire operational period at that site, even though each project used several types of countermeasures and many changes occurred in each project's countermeasure programs during its operational period. At best, such evaluation could have determined the efficacy of focussing money and attention on drinking driving; it did not have the potential to determine the efficacy of particular countermeasures.

None of the aforementioned were to denigrate the skillfully prepared final reports on ASAP (U.S. Department of Transportation 1979*a,b*), but these were obviously post hoc efforts to scavenge findings from a program not well designed to supply them. Exceptions to the generally poor experimental design associated with ASAP include the Short Term Rehabilitation study (Nichols et al. 1978) and a well-designed experimental evaluation of a "drunk driver school" at the Nassau County, N.Y., ASAP (Preusser et al. 1976).

The lack of adequate evaluation is not confined to the U.S. Department of Transportation. During the early 1970s, the National

Institute on Alcohol Abuse and Alcoholism funded 18 Problem Drinking Driver Programs (PDDPs) to operate in conjunction with the ASAPs. Stanford Research Institute, which was contracted with to "evaluate" the PDDP program, released its final report in 1975 (Eagleston et al. 1975).

Although the 131 page report reflects considerable work and expense, it is of little use in determining whether the PDDP program, or any of its components, brought about improvement in the persons treated. The report states:

It is apparent that PDDP treatment and rehabilitation does affect [sic] a positive change on client drinking patterns and behavior as measured in various ways at intake and six months after intake. This is accomplished at a relatively low cost per client—153 dollars on the average. As a result we recommend that these programs be continued. (p. II-6)

Even assuming that the measures at intake and 6 months were entirely adequate, the report's data do not adequately support its conclusion. First, there was no control group. It cannot be known from the report whether the programs' clients would have shown just as much or more improvement in the absence of treatment. There is evidence that drinking problems are often transitory and exhibit spontaneous remission in the absence of treatment (Cahalan and Roizen 1974). Second, the report does not account for, or even mention, distortion of the data due to only those potential clients likely to improve on their own being accepted into the programs and not dropping out. Only 77.2 percent of the clients making "initial contact" with a PDDP actually entered treatment (Eagleston et al. 1975). Even if there had been a control group, superior progress among those in treatment might have been a result of selection rather than of treatment.

Government Program: Research and Service

What can account for the persistent pattern of ignoring the most basic precepts of experimental design when planning and evaluating government drinking-driving programs? The answer, I believe, is that the persons and organizations with influence over these programs view them not as research, but only as service provision. The programs are treated as if they were applying well-developed technology to solving a problem (the word "service" is used here in a broad sense to include arresting drunk drivers, repairing roads, etc.).

If the programs are viewed only as service provision, the traits noted are predictable and expected, and in many cases represent good management. If the only purpose of the program is to provide service, then why spend money establishing control groups or collecting baseline data? Why wait until one project is evaluated before starting the next? These activities would reduce the amount of service one could provide. Of course, even a service provider sees the need for project evaluation, but the evaluation required is a management and

performance audit rather than a scientific investigation. If the technology has been assumed sound, then why question it?

Doubtless, the political pressure on government agencies is to "do something" about drinking driving rather than to "learn something" about it. There is much evidence that the agencies are quite responsive to this pressure. The ASAPs were touted as "demonstration projects" to *show* what could be done and how to do it. The result is a set of handbooks for State and local governments on how to run an ASAP-type program, but with no assurance that this is a good way to reduce drinking driving accidents (Hawkins et al. 1976; U.S. Department of Transportation 1979b). The PDDP "evaluation" is probably all a service provider could want in terms of reviewing the organization, management, and operation of these programs. It has little to offer those interested in whether PDDPs and programs like them are effective because it was never meant to address that question.

Unfortunately, we do not know how to prevent drinking-driving accidents and their related costs in a dependable and cost-efficient manner. It is therefore counterproductive to run government programs relating to drinking driving as if their only purpose is service provision.

Persons concerned with research and experimental design should participate with those concerned with service provision and program management from the earliest planning and budgeting stages of drinking-driving countermeasure programs. Federal agencies sponsoring such programs should view the development and rigorous testing of the countermeasure being used as a goal at least equal to the application of the countermeasure in an attempt to reduce drinking-driving accident costs. Programs should not be termed "demonstration projects" unless they are indeed demonstrating a countermeasure that the agency has good reason to believe will be effective.

If these recommendations are followed, there will doubtless be protests that resources are being diverted from saving lives to performing research. But if our goal is immediate savings of lives then we are investing our resources poorly. The U.S. Department of Transportation (1979a) estimates that the ASAP program saved 506 lives at a cost of 156,306 dollars each. I think a fairer estimate is that 425 lives were saved at a cost on the order of 300,000 dollars each.¹ Using either set of estimates, it appears that more lives could have been saved by using the ASAP money elsewhere. As the Department of Transportation (1979a) points out, "The National Highway Safety Needs

¹The DOT figure of 506 lives saved is based on the sum of accident reduction at all ASAP sites that exhibited a statistically significant decrease in accidents. I think it is more informative to subtract from this estimate the sum of accident increase at the two ASAP sites that exhibited a statistically significant increase in accidents, in order to balance gratuitous accident reductions at the sites exhibiting reductions. Thus, my figure is 425 lives saved. To estimate ASAP costs, I deducted the portion of Federal ASAP funds devoted to evaluation, and then doubled the balance to roughly account for other Federal funds, State and local expenditures, and expenditures by persons arrested for drunk driving. The resulting estimated cost for ASAP countermeasures is 141 million dollars.

Report . . . ranks 37 countermeasures [by] cost per fatality forestalled . . . The ASAP cost [156,306 dollars] would rank between number 14—motorcycle lights-on practice—and number 15—impact absorbing and roadway safety devices.”

Given our present level of technology for preventing drinking driving accidents, additional expenditures seem warranted only if they promise to produce findings that will help us improve the technology and save more lives in the future, as well as contribute to current traffic safety.

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Chapter 3

Diagnosis of Alcoholism in Relation to Treatment and Outcome

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Abstract

Diagnostic concepts and methods are both important and controversial. The methods of diagnosis are linked to the conceptual definitions of the term alcoholism, which is to be diagnosed. In turn, the definition of alcoholism varies with the goals of diagnosis. A distinction is made between the social reality of the alcoholic person who can be observed and the abstract concept of alcoholism, which is a matter of definition. The clear-cut obvious cases of alcoholism do not provide disagreement. However, there is disagreement on how to evaluate the wide variations in alcohol consumption patterns that involve use, misuse, abuse, and dependence. Further, different life patterns of alcohol use result in different types of alcohol-related problems. Alcoholism is best considered as a multivariate syndrome, that is, a variety of patterns of alcohol use, with variable causal factors and a wide variety of adverse consequences. Binary methods of diagnosis provide a single diagnostic decision—whether the person is or is not defined as an alcoholic. Multivariate methods of diagnosis provide different levels and different types of diagnostic conclusions, including diagnosis of causal factors, prediction of effective treatment, and assessment of treatment outcome.

Among the major attempts at definition of different alcoholism syndromes are the works of E.M. Jellinek, the World Health Organization, the American Psychiatric Association, and the National Council on Alcoholism. The primary focus of these diagnostic methods has been on binary diagnosis. Although useful for classification, binary diagnoses do not provide a basis for treatment selection, prediction, or evaluation. New methods of multivariate diagnosis are under development to provide clinically useful and relevant tools for multiple diagnostic purposes.

Introduction

The purpose of this chapter is to analyze the current status of the diagnosis of alcoholism. The rationale for the diagnosis of alcoholism includes social, political, legal, and medical goals. The problems

involved are both conceptual and technical. The purposes for which one makes a diagnosis of alcoholism are multiple: to screen populations, to make legal and medical referral decisions, to determine need for treatment, to select treatment methods and facilities, to predict treatment outcome, and to assess possible etiological variables.

We might hope for a simple definition of alcoholism, and a simple method to diagnose the alcoholic. Unfortunately, simple definitions and simple methods are not possible without sacrificing important scientific and clinical distinctions. And, in fact, the diagnosis of alcoholism is one of the more controversial issues in the field today (Jacobson 1976a, b). It is explicitly *not* the intent of this chapter to offer a simple diagnostic definition of alcoholism, for that would do injustice to the wide range of scientific and clinical debate at this time. Rather, this chapter aims to present an analysis of the issues involved in the diagnosis of alcoholism, complex as they may be, and to briefly survey the current meaningful attempts to bring order out of the diagnostic chaos.

The Goals of Diagnosis

The term diagnosis comes from the Greek root "diagignosko" which literally means to distinguish or discriminate. To diagnose thus means to identify a substance, event, behavior, or person. The diagnosis of alcoholism is the identification of alcoholism. What is it? There are several equally valid answers dependent upon purpose. Therefore, we shall examine four perspectives on the goals of diagnosis.

The Legal-Political Perspective

Deviant human behavior may be considered in two major classifications: deviancy defined as immoral and sinful, or deviancy defined as nonmoral and sickness. In turn, deviant behavior is addressed either through the social institutions of the political-legal system or the social institutions of the health care system. The major purpose of diagnosis of alcoholism in this perspective is to determine whether the nature of alcoholism is to be considered as sinful deviant behavior or sick deviant behavior; to discriminate between those persons whose deviancy should be addressed through the political-legal system and those addressed through the health care system.

Cross-cultural research has demonstrated that societies vary widely in their definition of alcoholism. These range from countries that prohibit alcohol use, such as certain Moslem nations, to preliterate societies which have widespread use of alcohol without intoxication or deviant behavior, to Western industrialized societies which have heavy alcohol consumption with various degrees of major social problems associated with drinking behavior (Heath 1975; Marshall 1979).

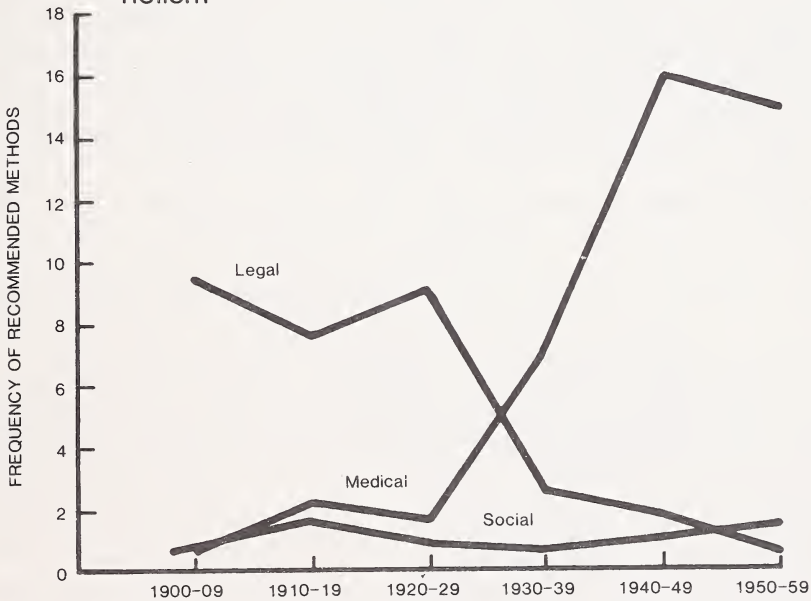
Alcoholism might be considered a legal problem in an abstinent nation, a social problem in a preliterate society, and both a legal and a

medical problem in industrialized states. How drinking itself, drinking behavior, and the consequences of drinking behavior are defined will vary with the amount of drinking, the type of drinking behavior, and the consequences of drinking behavior exhibited in a given society (MacAndrew and Edgerton 1969).

In the United States, the "cultural diagnosis" of alcoholism still varies widely, including the diagnosis of alcoholism as a biological, moral, personality, emotional, or chemical phenomenon. In turn, effective treatment is perceived in terms of medical, psychological, will power, religious, or legal remedies (Linsky 1972).

The main three American cultural perspectives view alcoholism as a medical, social, or legal problem. The major thrust of the legal-political movement in the United States in this century has been to change the cultural diagnosis of alcoholism from that of a sinful immoral behavior diagnosis). As illustrated in figure 1, this change in cultural diagnosis has been quite successful (Pattison et al. 1968).

Figure 1. Trends in Recommendations for Coping with Alcoholism



Source: The American Journal of Psychiatry, Vol. 125:2, pp. 162-164, 1968. Copyright 1968, the American Psychiatric Association. Reprinted by permission.

In sum, the legal-political perspective is concerned with the definition of alcoholism within the moral domain or the medical domain. In this view, the diagnostic assertion that "alcoholism is a disease" is a cultural diagnosis of alcoholismic behavior as a nonmoral deviancy, to be dealt with through the health care institutions of the society. This is a generic and nonspecific "diagnosis."

The Social Perspective

Here we are concerned with alcoholism as a social problem. From this perspective the diagnosis of alcoholism is viewed as a social process. At issue is how a specific society, or subsegment of society, creates and uses social rules to define certain behavior as alcoholic behavior, as differentiated from other drinking behaviors that are not to be classified as alcoholic. The range of drinking behavior that is diagnosed as "alcoholism" may be narrow or broad, depending on such social conventions (Robinson 1976). In American culture there is a relatively common pattern of repetitive heavy drinking with obvious deterioration of the person that almost every common man on the street, using conventional wisdom, would surely diagnose as alcoholism. But with wider variations on this "modal pattern" of alcoholism the social rules for the diagnosis of alcoholism become more imprecise. Much social drinking has been called a myth, because alcoholic drinking in social settings is often not labeled as alcoholism (Hayman 1967). Similarly, various patterns of erratic drinking, binge drinking, or high volume drinking might be variously labeled normal drinking, heavy drinking, or alcoholism, depending on the social rules of diagnosis. It is clear that different social processes result in very different diagnoses of what constitutes alcoholism. This problem has been referred to as "losing control over the concept of alcoholism" (Robinson 1972). In fact, from the social perspective there are many social definitions of alcoholism.

Another major issue from the social perspective concerns the "labeling" of a person as alcoholic—or placing a person in the social role of "alcoholic." This is a diagnosis of a social label and a social role.

The social role diagnosis of an alcoholic can be useful. It legitimates treatment of the person within the health care system, while at the same time the alcoholic person will be treated as a sick person in his or her social relationships. This can be salutary to all concerned. However, a person may resist being labeled as alcoholic—and refuse treatment under that label, although he or she might accept treatment without the label and role (Orford 1973). A person may use the label and role of alcoholic to obtain social or legal exoneration for behavior. Or a person may find a type of "negative identity" as an alcoholic, and find it difficult to assume a nonalcoholic role (Roman and Trice 1978).

The social perspective on diagnosis, then, focuses upon how social process discriminates a person as falling into the classification of alcoholic, and the possible positive or negative social consequences that may accrue.

The Treatment Perspective

The clinical view is essentially a pragmatic one. First, one seeks to make a diagnosis that alcoholism is present, so that health care treatment can be legitimated. This is termed a "screening diagnosis." The intent is not to determine all types of drinking behavior that might

be diagnosed as alcoholism, but rather to identify persons for whom there is reasonable certainty that treatment for alcoholism is indicated. Second, precise detail of diagnosis is closely related to precision of treatment. Where treatment is general and imprecise, there is little clinical need for detailed diagnosis. This has been the general state of clinical diagnosis of alcoholism, because until recently most treatment has been global and imprecise. Therefore, detailed diagnosis of alcoholism was not a clinically useful exercise. However, as significantly different treatment methods and treatment goals have been developed in the past two decades, this calls now for more detailed and precise diagnostic methods (Pattison 1976a, c, 1977a).

The Research Perspective

This approach to diagnosis aims to differentiate diagnostic criteria that will clarify etiology, prognosis, treatment prescription, prediction of response to various treatment methods, and evaluation of treatment effectiveness. These multiple goals of diagnosis are intertwined in complex fashion. Such complex diagnostic studies have been undertaken for the most part in just the last decade. Therefore, only the most preliminary and tentative conclusions can be drawn from these research efforts. However, advances in effective treatment methods are highly dependent upon the development of such sophisticated diagnostic research (Baekeland 1977; Baekeland et al. 1975; Mendelson and Mello 1979; Pattison 1979a, b; Pattison and Kaufman 1979).

The Focus of Diagnosis

It is clear that *alcoholics* (persons with problems due to alcohol use) exist in the real world. Alcoholics are a consensual observed social reality. On the other hand, *alcoholism* is *not* a statement of social reality, but is a theoretical, conceptual, or hypothetical statement that refers to an assumed condition.

In his highly influential book, *The Disease Concept of Alcoholism*, E. M. Jellinek (1960) proposed that the problems associated with alcohol use could be reasonably collated together in the *concept* of alcoholism. He further noted that there were many forms, patterns, and types of alcohol use subsumed under the concept of alcoholism, only some of which might properly be further defined as a disease. In fact, Jellinek referred to the concept in the plural, as *alcoholisms*. Thus, for Jellinek, not all patterns of alcohol use were to be considered under the concept of alcoholism, and indeed not all types of alcoholism were to be considered a disease. Unfortunately, this circumspect and felicitous formulation of the problem of diagnosis was subsequently overlooked in much public rhetoric, in which the *concept* of alcoholism as a set of variable patterns was turned into a concrete entity—a specific illness.

Technically, this is a logical process of "reification of a concept into a thing."

A more accurate approach is to consider alcoholism as a "hypothetical construct." Theory and hypothesis can be constructed in two ways: (1) to intuit an explanation or formulation of a problem, which can then be tested; (2) to collect research data from which an explanatory theory or hypothesis can be formulated. Intermediate between these methods is the "hypothetical construct," which MacCorquodale and Meehl (1948) have described as a method to denote a *set* of heterogeneous observations, data, behavior. Thus, to say that alcoholism is a "hypothetical construct" is to say that we shall denote a heterogeneous group of observations about people who use alcohol in destructive fashion as "alcoholism." *We can legitimately label the construct of alcoholism a disease*, without logically implying that alcoholism is a specific thing or entity. And we can proceed to empirically determine various useful limits for behaviors that may be included under the construct of alcoholism.

Here the focus of diagnosis shifts from the concrete diagnosis of whether a person "has it"—namely alcoholism; to a construct diagnosis, where the objective is to determine what patterns and types of alcohol use may be appropriately included in the construct of alcoholism for specific purposes.

Use, Misuse, and Abuse

The construct approach to diagnosis is clearly revealed in our consideration of patterns of use, misuse, and abuse.

The use of alcohol may be problematic for various reasons. In France it was long the custom to give young children diluted wine with their meals. As a result of such use, many French schoolchildren developed cirrhosis. In a similar vein, the high per capita consumption of alcohol by adult Frenchmen has resulted in an extraordinarily high level of medical illnesses as complications of chronic high consumption—it is estimated that perhaps 50 percent of medical hospitalizations in France are the direct consequence of chronic consumption (not just alcoholic admissions) (Sulkunen 1976). Here use produces physical abuse. A second pattern is the use of alcohol by an emotionally vulnerable person, which may trigger psychotic reactions, or chronic psychological disorganization, or acute disorganization creating panic states, suicidal ideation, and so forth. Here use produces psychological and physical abuse. Third, the illicit sale or use of alcohol can bring arrest, jail, and major social losses. Fourth, the use of alcohol in a social setting of prohibition may produce ostracism or other social sanctions, while at the same time provoking personal guilt, shame, anguish, or conflict. For example, social and psychological abuse might occur when a religious teetotaler adolescent starts drinking beer. In all such cases, the use per se would not be construed as problematic, but physical, psychological, or social complications ensue. Thus use constitutes misuse and abuse.

The misuse of alcohol would be construed in terms of adverse consequences directly consequent to alcohol use. For example, many people misuse alcohol at parties and other social occasions, in that there is reasonable expectation that such use may well result in arguments, fights, inappropriate behavior, sexual misconduct, and accidents. Here alcohol use may be claimed as "social exoneration" for the consequences; or, in another vein, alcohol may be used to "prime" oneself for deviant behavior. As a result, we find a high incidence of drinking prior to criminal actions (Pernanen 1976).

In abuse patterns, there is chronic recurrent use of alcohol, with both acute and chronic adverse consequences. Physiologic and/or psychologic dependence on alcohol is established. Such abuse can be socially acceptable, as in heavy "social drinking"; the use may be acceptable, as in drinking alcohol per se, but the consequent behavior may be unacceptable; or both use and consequences may be socially unacceptable.

Addiction, Habituation, and Dependence

Various terms have been used to denote alcohol dependence. In the first half of the century, many efforts were made to define a specific disease or state of addiction that was thought to be different from more moderate states of dependence, and was variously termed as alcohol habituation, alcohol dependence, alcohol misuse, or problematic alcohol usage. These "levels" are ambiguous and clinically meaningless, for the patterns vary widely in symptomatology and severity. Such labels should be discarded.

It is more appropriate to discuss the syndrome of psychic dependence and physical dependence. The differences are clearly stated in the *World Health Organization Bulletin* (Eddy et al. 1965).

Drug dependence is a state of psychic or physical dependence, or both, on a drug, arising in a person following administration of that drug on a periodic or continuous basis. . . . All these drugs have one effect in common: they are capable of creating, in certain individuals, a particular state of mind that is termed "psychic dependence". . . . this mental state may be the only factor involved, even in the case of the most intense craving and perpetuation of compulsive abuse. . . . psychic dependence can and does develop. . . . without any evidence of physical dependence. . . . Physical dependence, too, can be induced without notable psychic dependence, indeed, physical dependence is an inevitable result of the pharmacological action of some drugs with sufficient amount and time of administration. Psychic dependence, while also related to pharmacological action, is more particularly a manifestation of the individual's reaction to the effects of a specific drug and varies with the individual as well as the drug.

The phenomenon of *psychic* dependence results from the fact that alcohol is *psychoactive*. It changes the conscious state of the consumer

in one way or another. It does not matter much what change in consciousness is produced. The alcohol-dependent person relies on a change in consciousness to cope more effectively with self and to experience reality. Thus, alcohol-dependent people commonly also switch to other types of drugs, and develop mixed drug-alcohol dependence (Ottenberg et al. 1979). The alcohol-dependent person has a psychological reliance on the psychic effect of the drug to produce an altered state of consciousness.

As noted above, physical dependence is not necessary for a person to acquire psychological dependence. Anyone can be made physically dependent, without necessarily acquiring a psychic dependence. In fact, most moderate quantity drinking persons develop a mild tolerance to alcohol. Commonly this is termed "learning how to carry a drink."

The development of physical dependence lies in the pharmacological properties of alcohol, which allows it to become incorporated into the metabolic cycles of cellular physiology. This is the pharmacological "addictive property." As a result of this metabolic incorporation, two clinical features emerge. The first is the development of tolerance. That is, the body can tolerate more alcohol biologically without manifesting the pharmacological effects of the alcohol. As a result, one must consume more alcohol to produce a consciousness-changing effect. The second clinical feature is the production of withdrawal symptoms when alcohol is withheld. Withdrawal is a manifestation of altered organ function as a result of deprivation of the required alcohol as an essential metabolite.

In sum, physical dependence is a consequence of drinking. The primary roots of alcoholic behavior are rooted in psychic dependence. However, physical dependence can become a "secondary reinforcer" of drinking behavior.

Patterns of Alcohol Utilization

There are multiple patterns of alcohol utilization, which may comprise use, misuse, and abuse. People vary in vulnerability, their social milieu of prescriptions and proscriptions, and personal rewarding or adverse use experience, all of which influence patterns of actual alcohol use. We may consider actual alcohol use patterns as the consequence of a personal cost-benefit analysis.

Many people derive some psychic pleasure or reward, some social benefit, from alcohol use. At the same time there are personal and social controls and limits. These include legal constraints, moral and religious constraints, social expectations and sanctions about alcohol use, cultural norms, and personal values. As a result, most people establish a personal cost-benefit limit on how much they are willing to pay in a legal, social, moral, fiscal, and personal sense in exchange for the psychic and social rewards of alcohol use. Most people establish a reasonable cost-benefit ratio, and therefore avoid abuse of alcohol and use alcohol within low-cost limits (Vaillant 1980).

On the other hand, under certain psychological or social conditions a person may be unable to set such limits, may be unable to behave in accordance with personal limits, may believe that the benefits outweigh the costs, or may develop distorted perspectives in which they believe that they are paying much less than they actually are in their use of alcohol. In all these different circumstances, alcohol misuse or dependence may develop.

Persons who might otherwise be highly vulnerable to developing alcohol dependence may avoid such a possibility through total avoidance of alcohol use. This alcohol avoidance may be for legal, moral, religious, psychological, or social reasons. Former alcoholics learn that for the most part an alcohol-free existence is a major and necessary step to maintain a lifestyle that is devoid of dependence on alcohol.

The *alcohol experimenter* typically does not start out seeking or expecting to develop alcohol dependence.

1. If the drug experience is not rewarding, or if it produces adverse effects, the person may then become a non-alcohol-user and alcohol avoider.
2. Some people will experience nothing or will experience adverse alcohol effects, but will use alcohol occasionally as they participate in socially desirable or expected behavior.
3. Some, including a large number of average people, experience some positive, rewarding effects and engage in occasional legal use of alcohol. Here experimentation leads to degrees of use. Frequency and amount are well controlled, without adverse consequences.
4. A small number of people, who experience positive effects but who are not susceptible psychologically, will engage in more frequent use of alcohol in larger amounts. They may not experience loss of control over alcohol use, or develop any sense of psychic dependence, yet the amount of alcohol use may produce adverse effects physically, psychologically, or socially. This pattern typifies well-compensated, functional heavy drinkers, or habit drinkers.
5. There are those who are vulnerable psychologically and who engage in heavy alcohol use in a socially acceptable manner. They have a significant degree of alcohol dependence. Unlike the above heavy drinkers, these persons suffer degradation of function.

The *prescribed-alcohol users* present yet another developmental pattern. This includes self-prescription and physician-prescription.

1. Patients with primary neurotic symptoms, such as anxiety, depression, or hypochondriasis, may find that alcohol has symptom-relieving effects. Such patients may become dependent on alcohol to allay their symptoms, and they may develop psychological and physical dependence on alcohol secondary to their neurotic symptoms. This is a common pattern.

2. An uncommon pattern, but one that is nevertheless seen occasionally, is that of psychologically vulnerable patients who have some significant medical problem for which alcohol is prescribed (for example, acute pain from an injury). When introduced to the psychic effects of alcohol, such patients rapidly develop alcohol dependence.
3. Occurring with intermediate frequency is the pattern of patients with chronic pain, a chronic illness, or a fatal deteriorating illness. Here the use of alcohol may provide some realistic relief of pain and misery. A secondary psychic and physical dependence may ensue. For the dying patient such a situation may realistically be accepted. However, with chronic disease and pain problems, the complications of alcohol dependence rapidly outweigh the palliative value.
4. A common pattern is prescribed use of alcohol as a tranquilizer (Blume 1973).

Finally, there is the group of *alcohol seekers*. This can be divided into the self-medication group, the lifestyle group, and the cultural crisis group. Those in the *self-medication* group typically face a life crisis, and turn to alcohol deliberately to provide symptom relief. Anxious and depressed persons may turn to alcohol deliberately to assuage their psychic state. In a sense, they do not care about becoming alcohol-dependent because they seek relief at any cost. Another category is that of psychotic patients, who may find that alcohol causes their psychosis to remit. Such persons are usually very resistant to initial treatment, because alcohol is already their treatment.

The *lifestyle group* represents those who start out in life with major maladjustments. They typically turn to alcohol early in life deliberately to escape from their unhappy existence. The rewards of living in an altered state of consciousness outweigh all the costs of a destructive, alcohol-dependent lifestyle. For these people, an alcohol-free existence is no existence at all. Therefore, the development of a new lifestyle is critical to any rehabilitation program.

The *cultural crisis group* involves primarily indigenous ethnic groups in the midst of major cultural change, changing norms of alcohol use, and severe cultural conflict. Here individual personality variables are *not* of major significance. Rather, many people in the cultural group misuse alcohol as a reflection of cultural disorganization. Intervention here is not primarily in terms of personal clinical treatment, but must address fundamental social disorganization. For example, Bacon (1976), in a cross-cultural analysis of preliterate societies where Western patterns of alcohol use have been introduced in the past 100 years, reports that only about 8 percent have achieved cultural integration of alcohol use, whereas 92 percent have major alcoholism problems. Closer to home, in a recent study of the impact of the North Shore Alaskan oil development, Klausner et al. (1980) report that 72 percent of the native villagers under study have symptomatic alcoholism!

In summary, there are multiple patterns of use, misuse, and abuse of alcohol which in different contexts become the focus of diagnosis. However, such different alcoholisms vary widely in severity, prognosis, and type of societal intervention required. Therefore, the objective of diagnosis is to develop typological patterns which may have utility for different purposes: to determine etiology, to select treatment, to determine prognosis, to evaluate treatment, or to determine different methods of social intervention.

Types of Diagnosis

We may specify two major types of diagnosis: (1) binary diagnosis and (2) multivariate diagnosis. Each has important conceptual and practical implications.

Binary Diagnosis

The binary type is an either/or method. One either is alcoholic or is not alcoholic. The binary approach may be based on either a unitary or a multivariate frame of reference.

First, a binary diagnosis may be based on the assumption that there is a discrete unitary entity termed "alcoholism." The diagnostic goal is simply to find an effective means to discriminate between those who suffer from alcoholism and those who do not. As indicated previously, this theoretical assumption has little utility, and the search for an unequivocal method of accurate binary diagnosis has failed because the term "alcoholism" does not refer to a concrete entity, but rather to a diverse set of behaviors and problems. As Pattison and colleagues (1977) have outlined in detail, the "unitary" concept assumes that there is a distinct class of persons who "have" the specific disease of "alcoholism," who are substantively different from problem drinkers, heavy drinkers, prodromal alcoholics, and prealcoholics. However, the research data of the past 20 years clearly demonstrate that the "unitary" concept of alcoholism is incorrect. There is no one entity to which a binary diagnostic method can be applied. As Rohan (1976) has commented:

. . . the results show that the label alcoholic subsumes great quantitative diversity and that the present dichotomy of normal vs. abnormal drinker, or social drinker vs. alcoholic should be replaced with a concept of a continuum. The adverse effects of drinking are not linearly dependent on the quantity of drinking but depend on many other factors as well.

Second, the binary method of diagnosis may be based on a multivariate construct. Here we *a priori* set limits on a binary diagnostic decision, to either include or exclude persons to be diagnosed as alcoholic. For example, the diagnostic limits of alcoholism might vary in

a criminal trial, in screening drunken drivers, in assessing patients in an emergency room, in evaluating medical and surgical patients, and in cross-cultural, ethnic, or epidemiologic studies.

Multivariate Diagnosis

Most scientific authorities in the field of alcoholism now concur that the construct of alcoholism is most accurately construed as a *multivariate syndrome*. That is, there are multiple patterns of dysfunctional alcohol use, that occur in multiple types of personalities, with multiple combinations of adverse consequences, with multiple prognoses, that may require different types of treatment interventions (Belasco 1971; Caddy 1978; Davies 1979; Davis and Schmidt 1977; Horn 1978; Kissin 1977; Larkin 1974; Pattison 1974; Pomerleau et al. 1976; Replogle and Haim 1977; Willems et al. 1973). In brief, this construct of alcoholism implies the following.

1. There are multiple patterns of use, misuse, and abuse that may be denoted as a pattern of alcoholism.
2. There are multiple interactive etiological variables that may combine to produce a pattern of alcoholism.
3. All persons are vulnerable to the development of some type of alcoholism problem.
4. Treatment interventions must be multimodal to correspond to the particular pattern of alcoholism in a specific person.
5. Treatment outcomes will vary in accord with specific alcoholism patterns, persons, and social contexts.
6. Preventive interventions must be multiple and diverse to address diverse etiological factors.

The utility of the multivariate diagnostic method, according to Miller (1976), lies in the description of consistently intercorrelated sets of symptoms with implications for etiology, prognosis, treatment, and prevention. In contrast, the binary diagnostic method is limited, says Miller, because:

A large amount of information is lost when the data regarding various aspects of the problem are reduced to a binary nomenclature. Certainly this reduction cannot improve our prediction of such complex events as treatment outcome.

The Concept of Alcoholism as a Syndrome

The multivariate approach to diagnosis leads us to consider alcoholism as a syndrome (Edwards 1974, 1977; Edwards and Gross 1976; Edwards et al. 1976). Medical dictionaries define a syndrome as a group or set of concurrent symptoms which together can be considered a disease. Note that considering alcoholism as a syndrome does not vitiate labeling alcoholism as a disease, for medical practice in general deals with many syndromes that are not specific diseases.

In medicine there are lists of signs and symptoms of many diseases and syndromes. However, signs and symptoms are not necessarily the

same as definitive and obligatory diagnostic criteria. In medicine, there are signs and symptoms for most diseases. Yet the signs and symptoms may be identical for diseases of different etiology. For example, the signs and symptoms of pneumonia may be identical, even though there are different definitive diagnostic criteria in terms of etiology, such as pneumonia due to bacteria, or a virus, or a parasite, or congestive heart failure. Binary diagnosis of the condition of pneumonia is satisfactory to legitimate the diagnosis of the person as sick and in need of treatment. However, the binary diagnosis based on the signs of pneumonia is inadequate and insufficient to provide necessary and appropriate treatment. On the other hand, there are many syndromes in medicine for which signs and symptoms are the only available diagnosis, because specific etiologies have not been determined, or cannot easily be determined. In some such instances, as with a common cold or influenza, generic treatment methods may suffice, and the search for definitive diagnostic criteria are of no practical import. Or in a syndrome such as senile dementia, multiple factors interplay to produce a clinical syndrome. Here specific diagnostic criteria cannot yet be provided. However, treatment of senile dementia can be effectively instituted to rectify known factors that may contribute to the syndrome, such as nutrition, perceptual deprivation, social deprivation, and physical complications. Thus, one can have a diagnostic set of criteria for treatment.

Let us return to the case of pneumonia. The set of signs and symptoms provides justification for the diagnosis of the syndrome of pneumonia, which legitimates the person as ill with pneumonia, and justifies treatment. This is the binary diagnosis of presence or absence of pneumonia. The utility of making the diagnosis of pneumonia is neither therapeutic nor scientific. It is social, legal, political, and economic. But a multivariate diagnosis must be used to achieve scientific and therapeutic diagnosis of pneumonia.

In summary, one may appropriately use a binary or a multivariate diagnosis of alcoholism, dependent upon the purpose of the diagnostic process.

Methods of Diagnosis

There are a wide variety of methodological approaches to diagnosis. These will not be reviewed in detail, for no one approach is definitive. Rather, let us examine the diagnostic results that given methods provide.

Biologic Methods

The basic assumption of these methods is that there is some unitary biological phenomenon that underlies the clinical syndrome of alcoholism. Therefore, biological methods seek to find a specific biological

marker unique to those persons demonstrating the clinical manifestations of alcoholism. There is no question but that there are substantial biologic and physiologic system alterations consequent to the acute and chronic use of alcohol. These may be considered the biological *consequences* of use or abuse. However, *precedent* biologic differences that might *predict* a general or specific alcoholism syndrome, or that might be considered to be an etiologic biological factor, have not been scientifically established (Frances et al. 1980; Lipscomb and Nathan 1980; Rix 1977). This does not mean that biological correlates of alcoholism do not exist. Indeed, in severe chronic alcohol intake there are numerous classical biological consequences, such as liver, brain, heart, and nerve damage. Biologic measures of such physical consequences will have a high correlation with an alcoholism syndrome.

There are two problems with such biological diagnostic methods. First, the biological measures are an indirect diagnosis, since they reflect the consequences of alcohol use. Second, many persons may have alcoholism syndromes without biological damage and will not be diagnosed by these methods.

Psychological Methods

Just as there have been attempts to diagnose a specific biological basis for alcoholism, there have been repetitive attempts to diagnose an "alcoholic personality." As with the biology, the psychology has similarly failed. There are frequent and common patterns of psychological reactions found in persons with chronic, severe alcohol abuse, such as high levels of dependency, extensive use of denial, guilt, shame, anxiety, and significant depression. However, there is no unique personality or character structure common to all patterns of alcoholism (Mendelson and Mello 1979; Ogborne 1978).

However, a variety of psychometric methods have been devised to achieve binary diagnoses of alcoholism. These may be subdivided into indirect psychometric methods and direct psychometric methods.

Indirect psychometric methods rely on some test or measure of traits, attitudes, or behaviors that have a high correlation with a major and significant alcoholism syndrome. The prototype of this method is the MacAndrew Alcoholism Scale derived from the Minnesota Multiphasic Personality Inventory (MMPI) (MacAndrew 1965). The scale does not assess alcoholic behavior, but is a collation of MMPI items that correlate significantly with clinical alcoholism. For diagnostic screening purposes, such indirect measures have some utility, although the validity and discrimination of less typical alcoholism syndromes are probably low (Knox 1976; Neuringer and Clopton 1976).

Direct psychometric methods have the same binary diagnostic intent and screening utility. These simple paper and pencil tests are composed of items directly referable to alcoholic behavior (Jacobson 1976a, b). The prototype here is the Michigan Alcoholism Screening Test (MAST), which has relatively high validity and reliability for

screening (Selzer 1971). These might be termed self-identification tests (Kaplan et al. 1974). For binary diagnostic screening, a number of short, simple, inexpensive forms have been developed (Skinner 1979; Zung 1979). The disadvantage is that atypical and less severe types of alcoholism will likely not be identified.

Multivariate Methods

In contrast to the above methods, which might be termed single-method and single-decision diagnosis, the multivariate method employs multiple types of data collection, which may be subjected to several types of data analysis, yielding different diagnostic decision sets. The conceptual assumptions of this approach have been developed over the past 20 years to deal with measurement and assessment of social/behavioral phenomena. The problem of measurement is three-fold. First, the target problem is usually a complex set of social behaviors that are construed together as a "social construct." Examples might include social problems like criminality, poverty, or alcoholism. There is no one "thing" to be measured or evaluated—rather *the construct itself* is the target of evaluation. Second, there is no effective way to control all variables in actual social behaviors, so that a direct experimental design cannot be employed. Third, different specific pieces of the construct may require different types of measurement instruments—measures of personality, of attitude, of relationships, of behavior.

Therefore, the diagnosis of "social constructs" assumes that fully controlled experiments cannot be conducted. Rather, one must use "quasi-experiments," in which uncontrolled variables are clearly defined and specified (Campbell and Stanley 1966). Further, one must collect data in combinations of sequential steps. Such methods may produce multimethod and multitrait matrices of data, which are not additive but multiplicative (Campbell and Fiske 1959; Campbell and O'Connell 1967). Data analysis employs multivariate statistical techniques, which yield probability statements about the relationships between variables. One of the promising methods is termed "causal pathway analysis." This approach provides a series of diagnoses rather than a single diagnosis.

Definitions and Diagnosis

As we have seen, the diagnosis of alcoholism is problematic because there are many different conditions that can be diagnosed as alcoholism. The attempt to reach agreement on a core *definition* of alcoholism continues to be difficult and confusing. This is aptly reflected in the *Report of a Special Committee of the Royal College of Psychiatrists on Alcohol and Alcoholism* (Royal College of Psychiatrists 1979).

The word *alcoholism* is in common use, but at the same time there is general uncertainty about its meaning. Where is the dividing line between heavy drinking and this "illness"? Is it a matter of quantity drunk or damage sustained, or addiction, or of what else besides? This confusion is not limited to the layman, for final clarification has eluded the many experts and expert committees that have grappled with the terms to be used about drinking problems.

The underlying problems center upon a delineation of the *critical* elements to be included in a definition of alcoholism. As Mendelson and Mello (1979) observe: "Criteria for the diagnosis of alcohol abuse are imprecise and ambiguous."

The attempt to define critical elements has a long and checkered history among various official bodies, which we shall briefly review.

The Jellinek Classification

E. M. Jellinek (1960) attempted to provide a set of provisional diagnostic categories of alcoholism, which he labeled in order simply: alpha, beta, gamma, delta, epsilon. These were descriptive patterns of drinking. Jellinek did not consider these five types as all forms of alcoholism, but five types of alcohol use and abuse. Subsequent research has demonstrated that the five types were not useful for prescription of treatment or prediction of prognosis, because they were too vague and generalized.

Jellinek himself (1952) was well aware of the limitations of his descriptive approach to diagnosis and had even expressed dire concerns over the simplistic application of his typologies.

The lay public uses the term alcoholism as designation for any form of excessive drinking, instead of as a label for a limited and well-defined area of excessive drinking behavior. Automatically, the disease conception of alcoholism becomes extended to all excessive drinking, irrespective of whether or not there is any physical or psychological pathology involved in the drinking behavior. Such an unwarranted extension of the disease conception can only be harmful because, sooner or later, the misapplication will reflect on the legitimate use too and, more importantly, will tend to weaken the ethical basis of social sanctions against drunkenness.

In a very real sense, Jellinek anticipated the diagnostic work of the next 20 years, with his emphasis on differentiation between different patterns of alcohol abuse, the difference between dependence on alcohol and the consequences of alcohol use, and the importance of sociocultural variations in patterns of alcohol use, misuse, and abuse.

The World Health Organization

Through the work of a series of expert committees, the World Health Organization (WHO) has grappled with producing a universal and cross-

culturally valid definition of alcoholism, for which diagnostic criteria could be developed.

The first salient report in 1952, already quoted in a 1965 revision, focused on the quality of psychic dependence, with secondary physical dependence, as the critical elements of alcoholism.

But what constituted dependence? In another WHO report (1964) the term dependence was defined as:

A state, psychic, and sometimes also physical, resulting from the interaction between a living organism and a drug, characterized by behavioral and other responses that always include a compulsion to take a drug on a continuous or periodic basis in order to experience its psychic effects, and sometimes avoid the discomfort of its absence. Tolerance may or may not be present.

These reports gave rise to the ensuing formulation of alcoholism as a syndrome, termed the "alcohol dependence syndrome," with the following cardinal elements (Edwards and Gross 1976; Edwards et al. 1976):

- narrowing of drinking repertoire
- salience of drink-seeking behavior
- increased tolerance to alcohol
- repeated withdrawal symptoms
- relief-avoidance of withdrawal
- subjective awareness of compulsion to drink
- reinstatement of syndrome after abstinence

However, the definition of the syndrome did not resolve matters. Further research revealed that many persons with some degree of the alcohol dependence syndrome were quite socially functional, while other persons, with little if any evidence of the syndrome, engaged in severe abuse of alcohol in terms of disordered behavior and adverse consequences of drinking. To address this situation, the 1977 WHO report (Edwards et al. 1977) and the Royal College of Psychiatrists (1979) report recommended that two basic classifications be employed:

1. the alcohol dependence syndrome
2. alcohol-related disabilities

Both reports suggest an overlap between the two sets, yet they define two distinct types of alcohol problems.

In brief, the WHO reports present a substantial attempt to clarify the definition or definitions of alcoholism. Yet, the current flux reflects the unresolved conceptual issues of definition (Davies 1979).

The DSM III of the American Psychiatric Association (1980)

The new 1980 diagnostic criteria of American psychiatry are explicitly atheoretical, in that they do not attempt to infer how a disorder develops. Rather, diagnosis is based on the description of clinical features. In this sense, the *Diagnostic and Statistical Manual of Mental Disorders*, third edition (*DSM III*), approaches the definition of alcohol-

ism in terms of observed typologies like Jellinek's. The WHO definitions are built upon etiological assumptions.

DSM III classifies alcohol intoxication, alcohol withdrawal, and alcohol organic mental disorders, as well as alcohol abuse and alcohol dependence. Alcohol abuse is defined as pathological use for at least 1 month that causes impairment in social or occupational functioning, while alcohol dependence in addition includes either tolerance or withdrawal.

As with the other definitions, the *DSM III* categories are too general and imprecise for the purposes of treatment prescription or prognosis, although the *DSM III* has utility for binary classification.

The NCA Diagnostic Criteria

In 1972 the Criteria Committee of the National Council on Alcoholism (NCA) (1972) published a diagnostic criteria instrument to meet the then pressing social need to present a definitional set of criteria that would represent a consensus of medical opinion. Although widely publicized, the NCA criteria in their original form have been little used.

The diagnostic instrument consists of 86 items of information that are commonly associated with alcoholism, ranging from autopsy findings, to laboratory tests, to drinking behaviors, to information from family or friends. It is a 'laundry list' of items that may help the physician review the overall status of the patient, and provide salient information upon which to base a diagnosis of alcoholism. It produces a binary diagnosis only.

The problems with this set of 86 criterion items are manifold, and illustrate the problems of diagnosis based just on common signs or symptoms associated with alcoholism.

- Emphasis on late adverse consequences of drinking in the items skews the diagnosis toward late stages of alcoholism, and fails to provide diagnostic markers of early or prodromal stages.
- Item emphases on indirect consequences of drinking (e.g., marital fighting) are nonspecific, not unique or diagnostic of alcoholism.
- Major emphasis on physical consequences of drinking minimizes diagnostic detection of alcoholics without such physical signs and symptoms.
- Lack of discriminant validity of items (e.g., odor of alcohol on breath) weakens diagnosis, since an alcoholic may not have been drinking at interview, while a nonalcoholic may have.

Again, the general problem of developing accurate criterion items that are valid, reliable, and discriminatory is revealed in various diagnostic studies related to the NCA criterion items.

Item reliability was tested by Holland et al. (1979), who found that items such as causes of drinking, psychological reasons for drinking, decreased tolerance reports, welfare or disability status, and usual times for drinking are diagnostically unreliable. Similarly, Stein and

Bowman (1977) found that measures of escape or symptomatic drinking were insignificantly related to drinking patterns or consequent behavior.

The issue of item validity is raised in a study by Justin (1979) on routine breath analysis for alcohol. In 535 consecutive outpatients, Justin found 6 positives: 1 due to mouthwash, 4 nonalcoholics, and 1 alcoholic. Meanwhile, he clinically diagnosed 22 alcoholics in the series, none with positive breath analysis.

The problem of the heavy emphasis given to physical criteria in the NCA schemata is illustrated by two different types of investigations. First, Breitenbucher (1976) examined 70 identified alcoholics. Only 27 were identified by clinical medical examination and 43 were identified by the MAST self-report, but only 5 of 70 had physical criteria matching the NCA diagnostic criteria. Second is a series of papers by Drum and Jankowski (1977, 1978; Jankowski and Drum 1977, 1978). The only consistent physical and laboratory NCA items that were present in the majority of alcoholics were two laboratory findings: liver histopathology and erythrocyte macrocytosis. These were found only in severe chronic alcoholics. Although these researchers could increase their positive identification of alcoholics to 99 percent through an extensive battery of tests, such cases were only hospitalized severe cases of alcoholism. More important, this battery also produced up to 40 percent false positives. These studies illustrate the limitations of undue dependence on physical criteria items.

The problem of lack of item precision is illustrated in a study of eight different measures of alcohol consumption by Streissguth et al. (1977). They report low intercorrelations between the eight scales, while each scale tended to detect different types of alcoholism consumption. Thus, even with sophisticated scaling methods, we still do not have an acceptable diagnostic measure based on alcohol consumption.

The problems of item reliability and discriminant validity were specifically assessed on the NCA criteria by Ringer et al. (1977). They found that only 38 of the 86 items were discriminatory. While they did identify their alcoholic sample correctly at 99 percent accuracy, they also had a 47.5 percent false positive identification of controls.

Although a physician sample has provided face validity concurrence with the NCA criteria items (Filstead et al. 1976), it does not meet more precise psychometric requirements. An attempt to operationalize and quantify the NCA criteria items is reported by Landeen et al. (1977). They clustered 9 major and 27 minor criteria. Their experimental sample consisted of severe chronic alcoholics. Given this population, they were able to use either major or minor criteria to discriminate alcoholics at a high level of statistical significance. However, in comparison, the simple self-report brief BMAST test was just as effective a diagnostic instrument. Further, in a sample of 60 alcoholic patients, the BMAST produced only 4 diagnostic errors (6 percent), which were 4 false negatives. Using the major criteria produced 11 diagnostic errors (18 percent), which were 10 false negatives and 1 false positive; and using the minor criteria resulted in 20 diagnostic errors (33 percent), including

15 false negatives and 5 false positives. This study is particularly instructive, for it demonstrates that the NCA criteria can be quantified. But it produces high rates of false negative and false positive diagnoses and, more important, a simple quick test like the BMAST is much more accurate.

Other attempts are underway to modify the NCA criteria. Researchers at Brown University are devising sequential decision tracks for the differential use of criteria items. This project is in a preliminary stage of development (Johnston et al. 1980). A more advanced project under G. R. Jacobson (Jacobson and Lindsay 1980; Jacobson et al. 1979) has revised many of the NCA items to meet the psychometric problems identified. This last revision, called MODCRIT II, has acceptable psychometric construction with very good binary screening validity.

Summary

There are still multiple definitions of alcoholism in scientific use, and as many definitions of an alcoholic. It may well be that there is no single set of criteria which can be suitably used to diagnose all types of alcoholic syndromes. In that case, the search for a single simple binary diagnostic method that will accurately diagnose a universal condition of alcoholism would be a meaningless task. Rather, we would need to develop different binary diagnostic methods to diagnose different types of alcoholism.

The clinical use of multivariate diagnosis is currently limited by several factors. First, it may be more expensive in terms of dollar cost and scarce personal resources to offer multiple-method treatment programs. Second, some differences among alcoholic populations may constitute "differences that do not make a difference." Thus, it may be clinically reasonable to avoid irrelevant differences and maximize common treatment interventions. Third, there is a need to avoid the indiscriminate mixture of many methods of treatment in contrast to selective individualized treatment plans. Indiscriminate multiple treatments have been shown to produce poor treatment results, whereas focused selection of treatment appears to maximize favorable outcome (Costello 1975a, b).

Diagnosis in the Prescription of Treatment and Prediction of Prognosis

In contrast to the binary diagnostic methods discussed in the previous section, we may consider multivariate diagnosis. In this case

we are interested in multiple diagnoses, which have specifically different purposes.

Multivariate diagnosis examines a *series* of different diagnostic decisions appropriate to specific phases of a system of rehabilitation (Glaser et al. 1978; Kissin 1977; Larkin 1974; Pattison 1974). These are illustrated in figure 2.

Potential alcoholic persons make contact with a variety of community agencies, where identification (Phase A) and triage (Phase B) occur. Here, TYPE I diagnostic decisions must be made, which are DEFINITIONAL. That is, binary diagnostic decisions are made as to whether to label a person as alcoholic and refer the person for treatment of alcoholism. Upon contact with a treatment agency three phases are involved: the entry process (Phase C), initial generic treatment (Phase D), and selection of ongoing specific treatment (Phase E). These TYPE II diagnostic decisions are PROCEDURAL. Finally, there are TYPE III EVALUATIVE diagnostic decisions during the monitoring of treatment (Phase F) and return to the community (Phase G).

The use of this or similar models is necessary in order to utilize multimethod and multitrait diagnostic procedures to arrive at causal path analyses of diagnostic factors. For the *methodology is dependent* upon a face-valid *clinical* description of the processes involved in the development and treatment of alcoholism. Magoon (1978) makes this point clearly.

A different and more profound weakness is the lack of good description of the modeled situation; many path analysts simply do not spend sufficient time carefully examining the phenomena they model statistically. Good applications of path analysis will often have to await the patient accumulation of case study data, longitudinal studies, and ethnographic accounts in order to be reasonably useful as statistical accounts of the whole interrelated phenomenon.

Now let us consider "blocks of variables" associated with each phase of treatment. Each block of multiple data may be assessed to arrive at a diagnosis for each phase of treatment. These blocks are shown in figure 3.

Figure 2. Phase Sequences of Treatment

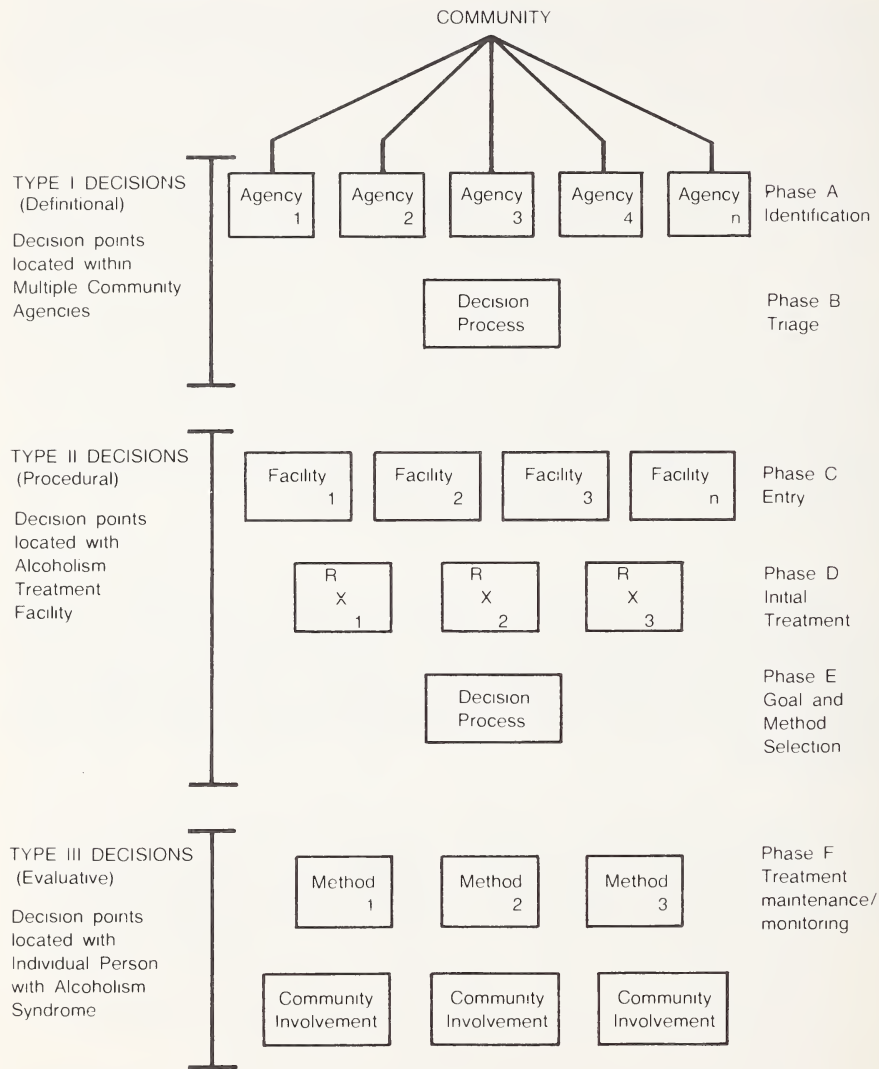
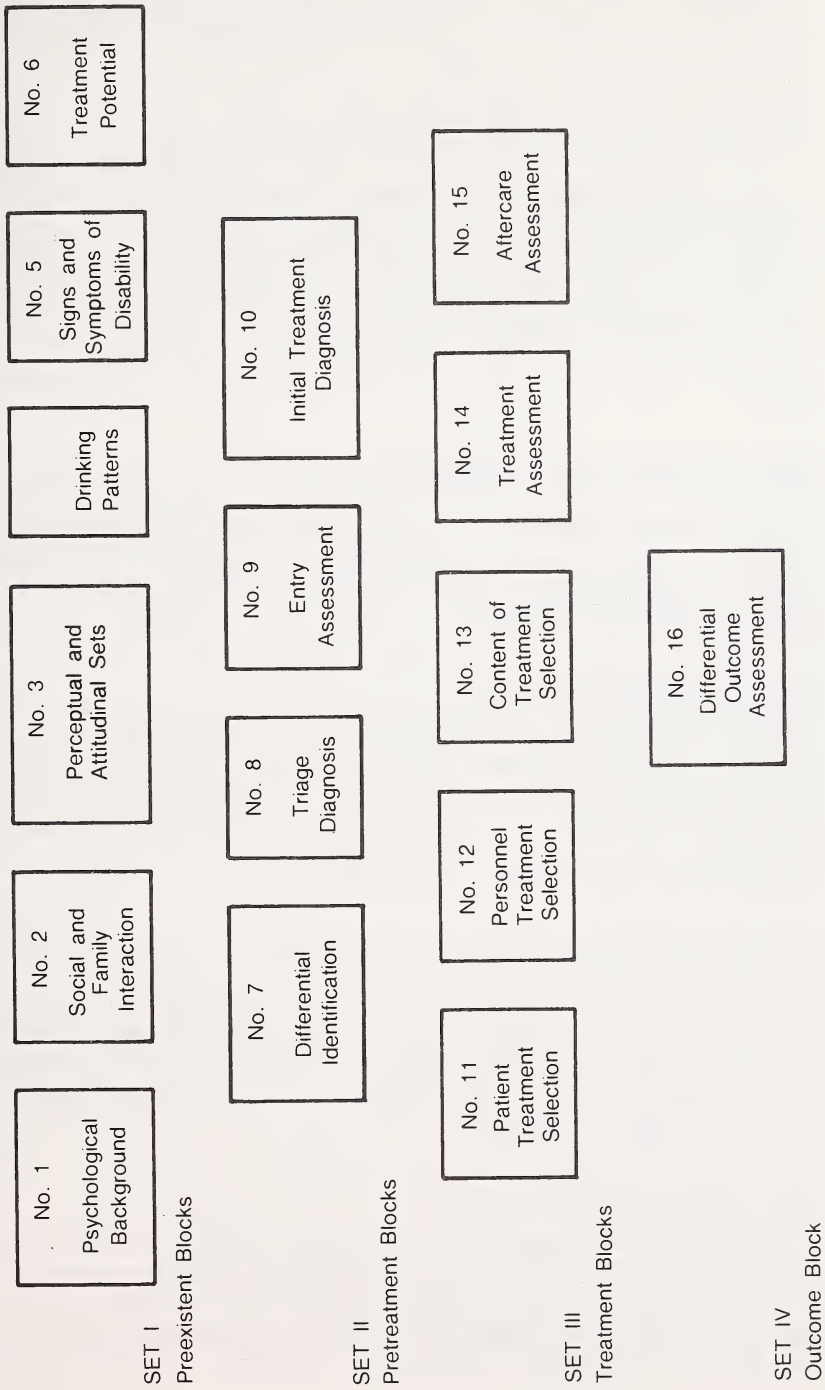


Figure 3. Block Variables for Causal Pathway Analysis



Block 1. Psychosocial Background

Variables here include age, sex, ethnicity, vocational skills and competence, education, and marital and social history. Taken together they comprise a level of *psychosocial competence*.

Block 2. Social and Family Interaction

This involves the *current* level of social function and interaction with spouse, family, relatives, and significant others in the community. It includes the alcoholic's social standing, degree of social deviancy, and the extent of social support for treatment or social support for continued alcoholism. These factors influence entry into treatment, program participation, aftercare participation, and ultimate treatment outcome (Moos and Bliss 1978; Moos and Bromet 1976; Moos et al. 1979; Orford et al. 1976; Rae 1972; Smith 1967; Webb et al. 1978; Wright and Scott 1978).

Block 3. Perceptual and Attitudinal Sets

This includes the similarities and differences of the alcoholic and significant others about the definition of the alcoholism, need for treatment, motivation for change, perceived needs, and perceived goals (Henry and Zastowny 1978).

Block 4. Drinking Patterns

This involves measures of consumption (Khavari and Farber 1978; Little et al. 1977); the severity of the consequences of drinking behavior (Hilton and Lokare 1978; Shelton et al. 1969); the meaning, involvement, and investment in drinking (Gillies et al. 1975); and possible assessment of the stage of development of the alcoholic process (Mulford 1977, 1979; Stallings and Oncken 1977).

Block 5. Signs and Symptoms of Disability

This involves the degree of dysfunction and loss of competence due to alcoholism. It includes physical disabilities; neuropsychological disabilities, which may limit program participation, and may or may not be reversible (Berghlund et al. 1977; Tarter 1976); vocational disabilities; and social/family disabilities.

Block 6. Treatment Potential

This component is derivative from data in Blocks 1-5. A "good risk" alcoholic with many assets and few disabilities might respond equally well to a variety of treatments, whereas a "poor risk" alcoholic like the skid row stereotype with few assets and many liabilities might respond poorly to any treatment intervention. In between these extremes are

probably different types of alcoholics who vary in their prognosis for improvement in specific areas of disability.

Block 7. Identification

This includes definitions of who is alcoholic, information imparted, attitudes and expectations generated, social constraints on entry (probation, jail, divorce, treatment fees), and the context of identification (welfare, police, medical).

Several recent studies have reemphasized the difficulty in linking the alcoholic from the identification agency to the treatment agency (Corrigan 1974; Vogler et al. 1976). This process may skew the type of alcoholic who enters treatment, or the degree to which a "good match" is obtained so that the alcoholic actually enters a suitable treatment program.

Block 8. Triage

Variables include criteria for referral, method of referral, mechanisms of referral, participation of the index alcoholic in the referral process, availability of referral resources, and degree of objective and subjective suitability and acceptance of referral.

This is a critical phase, for most dropouts occur right here. This is undesirable, of course, from a clinical standpoint, and certainly biases predictive research efforts. Baekeland and Lundwall (1977) report that dropouts from inpatient programs range from 13 to 40 percent, and in outpatient programs from 52 to 75 percent. Here patient motivation, attitudes, expectations, and perceptions of the program become initial interactive variables (Moos and Bromet 1976; Pratt et al. 1977). In addition, the "social climate" of the program is an immediate determining variable (Bromet et al. 1976).

Block 9. Entry Assessment

This includes prior negative treatment experience, self-expectations and perceptions, significant-other expectations and perceptions, social climate, waiting time for entry, degree of immediate support and reduction of anxiety, degree of immediate symptom relief, provision of necessary immediate life support (food, clothes, shelter), degree of entry mechanics such as paperwork and financial evaluation, and participation of significant others in the entry phase. Immediate physical assessment in terms of need for detoxification, immediate major physical impairments, and maintenance of daily life patterns are paramount here (Feldman et al. 1975). Reports indicate the importance of providing socialization with other clientele (Gallant et al. 1966), immediate involvement of the family and significant others (Catanzaro et al. 1973; Pattison 1965; Pattison et al. 1965), and education about alcoholism and information about further treatment alternatives (John 1976).

Block 10. Initial Treatment Diagnosis.

Variables include needs for medical, welfare, and social intervention, degree of socialization, involvement of family and significant others, and methods and mechanisms for transition into intermediate phases of treatment.

Block 11. Patient Treatment Selection

First, individual expectations and goals of treatment are included (Canter 1972; O'Leary et al. 1979; Pattison 1979a). The second variable is the degree of patient participation in the evaluation and selection of treatment alternatives (Ewing 1977; Vannicelli 1979). The third is the interaction of patients with other patients which provides a specific gestalt of treatment experience (Price and Curlee-Salisbury 1975).

Block 12. Personnel Treatment Selection

This would include the attitudes, values, and interests of treatment personnel; their levels of training and competency; congruency and collaboration between team personnel; and congruency and interaction between treatment personnel and the patient (Pattison 1973).

Block 13. Content of Treatment Selection

Specific types of treatment would be the first variable; the second would be more generic aspects of treatment implementation, including frequency, intensity, and levels of interaction; the third would be singularity of treatment or combinations of treatments; and the fourth would be combinations of persons involved in the treatment process—for example, individual, marital, family, peer, and social network members of the treatment process (Bromet et al. 1976, 1977).

Block 14. Treatment Assessment

Variables here might include the degree of patient participation in selection of methods and goals, the congruence of methods and goals with prior status and potential for change, the methods and mechanisms of assessment, and the degree of feedback utilization of such clinical assessment (Bean and Karasievich 1965).

Block 15. Aftercare Assessment

Variables include linkage to the treatment program; methods and mechanisms of transition; linkages between clients; linkages to family, significant others, and community social network; level of participation and significant-other response. This has been a neglected dimension until recently in the sequence of treatment. But recent evaluative studies provide modest support for the value of aftercare programs (Chvapil et al. 1978; Dubourg 1969; Kirk and Masi 1978; Pittman and

Tate 1969; Pokorny et al. 1973; Sands and Hanson 1971; Vannicelli 1978). Perhaps more important is the issue of community reentry and the reinvolvement of the alcoholic in community life and structure with family, significant others, and community relations, which have been shown to be significant factors in subsequent outcome (Bromet and Moos 1977; Finlay 1966; Simpson and Webber 1971). Pattison (1976*b*, 1977*b*) has elaborated the conceptual aspects of this "social network" structure, and has termed these "psychosocial system interventions."

Block 16. Differential Outcome Assessment

The first set of variables in this block concerns biases in sampling as outlined by Miller et al. (1970). A second set includes different sources of information that can provide convergent validity of outcome measures, as indicated by Sobell and Sobell (1978). Third are the variables associated with the location of and cooperation of subjects. Moos and Bliss (1978) found that difficult-to-locate and uncooperative subjects were generally in the poor outcome category.

Summary

The above outline lists 16 sets of different "factors" that must be taken into account in the development of diagnoses that may provide predictors of appropriate treatment and outcome. The technical methods for measurement and statistical manipulation of these variables will not be discussed here. However, we can note four major diagnostic strategies under development at this time.

The first strategy is to use personality variables to construct predictive "types" of alcoholics (Mogar et al. 1970; Partington and Johnson 1969; Smart and Gray 1978). Similar predictive typologies have been constructed using sociodemographic variables (Hart and Stueland 1979*a, b*). These typologies are clinically meaningful and have some predictive strength. However they focus only on "patient" variables, and do not take into account "treatment variables" that may influence outcome.

A second strategy compiles correlations between treatment outcome and preexistent variables (Gibbs and Flanagan 1977). This provides group data, but ignores individual differences.

A third strategy uses multivariate interactions to construct typologies. This takes into account the patient and the treatment. The works of Marlatt (1975) and Horn and Wanberg (1969, 1970; Horn et al. 1974; Wanberg and Horn 1970, 1973; Wanberg et al. 1977) are distinctive here. This method is somewhat limited in that it does not account for changes that occur in interaction during the sequence of treatment.

The fourth strategy is termed causal pathway analysis. Pioneers in the application of this method to alcoholism diagnosis are R. H. Moos and his group at Stanford University (Bromet and Moos 1977; Bromet et al. 1976, 1977; Cronkite and Moos 1978; Finney and Moos 1979; Moos

and Bliss 1978; Moos and Bromet 1976; Moos et al. 1979) and R. M. Costello at the University of Texas, San Antonio (Costello 1977, 1978; Costello, Biever, and Baillargen 1978; Costello, Lawlis, Manders, and Celistino 1978; Costello et al. 1976, 1980). This method produces diagnostic predictors for each phase of the treatment process. Thus, we may be approaching a time when we may begin to scientifically prescribe appropriate differential treatment geared to meet individual alcoholism problems.

Conclusions

This chapter has examined the tasks of diagnosis in the field of alcoholism. Ultimately diagnosis should be linked to etiology, treatment selection, prediction, prognosis, and evaluation. The development of sophisticated diagnostic procedures in the field of alcoholism has been limited by conceptual and technical problems. The conceptual problems revolve around the difference between alcoholism as a concrete entity and alcoholism as a social construct. This has impeded appropriate definition of the target constructs to be subject to diagnostic evaluation. The technical problems revolve around the failure to distinguish between binary diagnosis and multivariate diagnosis. Both are important and useful, but require different technical methodologies. Significant research advances are being made in both binary and multivariate diagnostic methodologies. Although not discussed here, the medical diagnosis of physical consequences of alcoholism has been refined to great technical accuracy. General binary screening or classification criteria now available have clinical utility. The challenge for the future is to develop predictive diagnostic methods applicable to clinical practice.

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Chapter 4

Methods of Intervention

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Abstract

Controlled studies comparing the treatment results of early intervention with those in advanced stages of alcoholism or problem drinking have not yet been done. Nevertheless, as with all other social or medical disorders, it is assumed that corrective efforts during the incipient phases of dysfunctional drinking practices will be more rewarding than trying to manage late stage alcoholism.

A cultural shift in attitudes has taken place in recent years. More people are openly acknowledging their problems with alcohol and are seeking assistance for them at an earlier point in their drinking careers. This poses a challenge in both early identification and in adapting the traditional treatments designed for more advanced problem drinkers to be appropriate for the emerging problem drinker.

Social, psychological, and medical early warning systems have been devised, and these are being improved. Techniques for detecting impending loss of control over one's drinking are known. The periodic, stepwise increase in one's consumption pattern, incremental drinking, culminating in excessive alcohol intake, must be identified and reversed.

Many barriers to early intervention remain. They exist within the individual at risk, in the treater, and in society at large. The problem of continuity of care from referral source to treatment unit still exists. Substantial problems in the retention of clients in treatment remain. Further basic changes in our cultural attitudes toward alcohol and harmful drinking practices will be required before full-scale early intervention becomes a reality.

Introduction

Definitions

Early intervention consists of the identification of persons or groups whose drinking behavior places them at risk and of persons in the early stages of destructive drinking practices. It includes their involvement in corrective learning and emotional experiences designed to help them develop abstinence or more benign drinking patterns.

In this paper the terms prealcoholic, midlevel or emerging problem drinker, incipient alcoholic, abusive or dysfunctional drinker all are used to describe "persons who have begun to lose control over their drinking, but have not, as yet, lost the capacity to function, to relate to people, or to continue in reasonably good health" (Zinberg 1977). These are the candidates for early intervention.

Early intervention is conceptualized as the equivalent of secondary prevention, the attempted reversal of the early stages of dysfunctional drinking by individuals or homogeneous groups at risk. Secondary prevention contrasts with primary prevention, i.e., the educational approaches that attempt to reinforce healthful drinking attitudes especially, but not exclusively, among youths. Tertiary prevention consists of the formal treatment and rehabilitative measures for those with established, disabling, psychosocial-medical disorders.

No effort is made here to distinguish between early versus mid-phase intervention. The disabilities resulting from abusive drinking practices are to be found on a unimodal distribution curve without a clearly definable point on the continuum that separates early from midphase drinking problems. The distinctions between early and midphase drinkers and the end-stage drinker (the problem drinker or alcoholic) are more evident and distinct, but even here it is often a matter of degree and duration rather than of any identifiable qualitative difference.

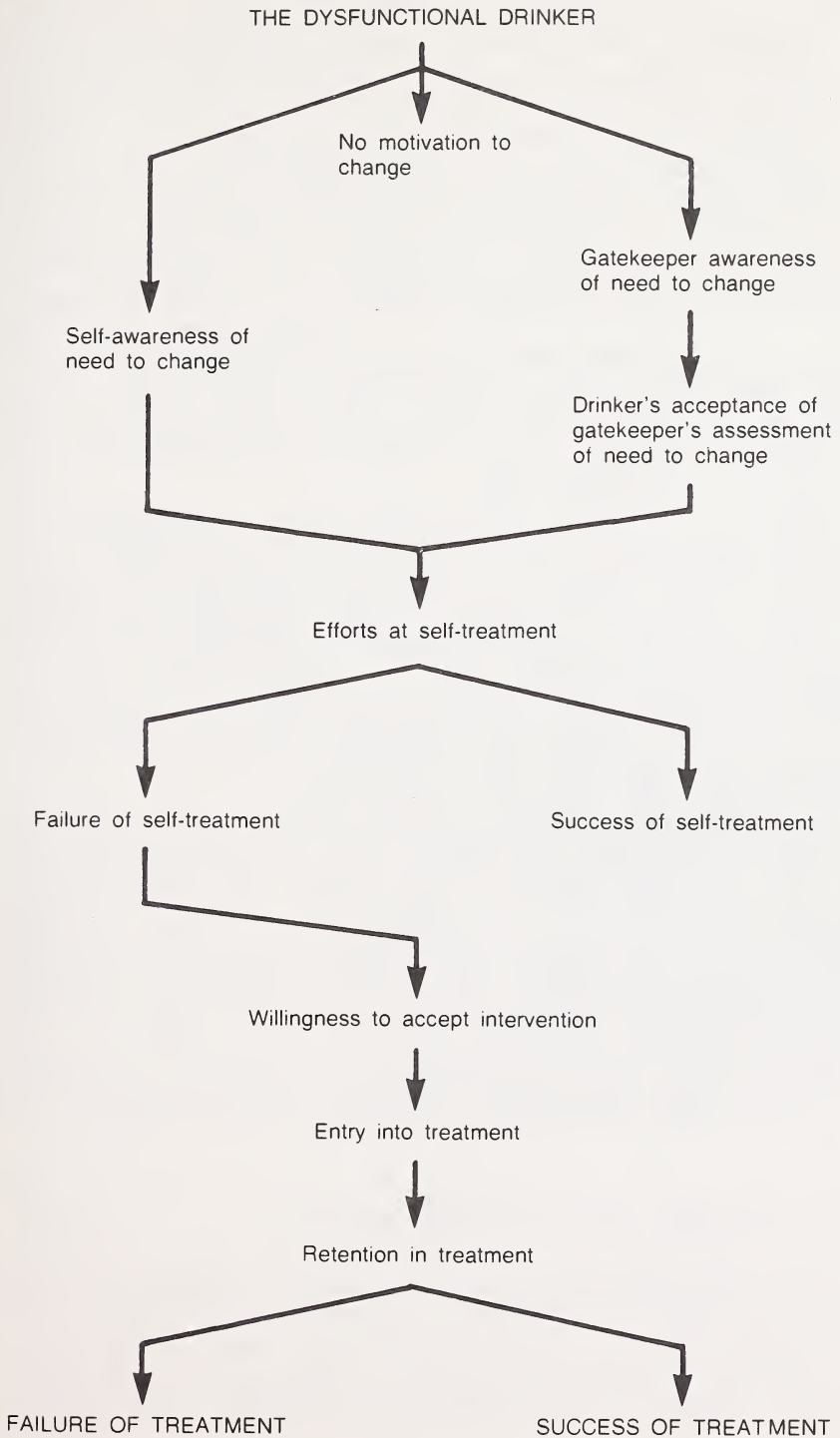
A Model of Early Intervention

A model of early intervention is proposed here (figure 1). A large number of people discover that their drinking practices are becoming hazardous. Others are persuaded by some concerned person that they are drinking dysfunctionally. Awareness and acceptance of this information lead, in some people, to a desire to reverse their noxious drinking habits. The first efforts are usually efforts at self-treatment—at quitting or at "cutting down."

An even larger number of dysfunctional drinkers are unaware of, rationalize, or deny their problem. If confronted by convincing evidence of the ominous trend in their alcohol usage, they will either make no effort or only abortive and ineffectual attempts to do something about it. This group remains a major challenge to early intervention; it can only be influenced by a major change in our national attitudes toward alcohol.

To continue to follow the course of those who desire to change their drinking pattern: some emerge successfully after one or more courses of self-treatment either as abstainers or as long-term moderate drinkers. Many others fail to reduce or eliminate their alcohol intake after repeated attempts. Those in the latter group must now decide whether

Figure 1. An Early Intervention Model of Alcohol Abuse



or not to accept intervention assistance. Many positive and negative factors affect the decision to enter a treatment program.

The positive factors that move a person into treatment are readily identifiable. Of these, client motivation is probably the most important. Motivation is highly variable over time. One of the important aspects of successful treatment is enhancing motivational levels. Family support and rewards are also of considerable assistance. The value of benign coercion, whether from the employer, the family, or the legal establishment, cannot be denied. Benign coercion is clear, constructive, and specific, but should not be so threatening or devastating that the recipient feels resentful or totally defeated. If the client can become involved in making plans for the future that exclude excessive drinking, this is helpful. In those cultures where excessive drunkenness is not an acceptable behavior, cultural supports can contribute to the desire to avoid such practices. Finally, a few would-be clients may be moved into treatment in connection with some critical incident involving drinking, for example, an accident while drunk.

Some of the barriers to accepting intervention are the opposite of those positive elements mentioned above: pseudomotivation or low levels of motivation, no family support or even family sabotage of treatment efforts, and a lack of future orientation that excludes excessive drinking. If the person's subculture happens to be one that promulgates heavy drinking, this is a negative factor not easily overcome. In the same vein, the peer group of drinking companions is a strong deterrent to entry into treatment. Naturally, difficulties in obtaining treatment itself will discourage even those with a strong willingness to accept professional intervention.

Once a person is engaged in an alcohol treatment program, his or her retention will depend upon some of the same factors that propelled the client into therapy. Stated in positive terms, high client motivation, the client's satisfaction with and rewards from the treatment process, and the evident effectiveness of the exposure to treatment as reflected in improved relationships with others all favor retention. The adoption of a new lifestyle that does not include companions who are heavy drinkers can make a substantial difference. Even a minimum of the customary inconveniences and discomforts of involvement in a program may make the difference between staying with it and dropping out.

The Challenge of Early Intervention

Once the excessive consumption of socially acceptable, recreational substances becomes a danger to the individual and society, it is uncommonly difficult to reduce the personal and national costs. Alcohol and tobacco overuse present certain similar problems. We have excellent evidence of their morbidity and mortality, but the rational

transfer of this information makes a surprisingly small impact upon those at risk.

The problem facing attempts at secondary prevention of excessive drinking is the fact that consuming beverages containing alcohol is a cultural norm. It is difficult for prealcoholics to acknowledge their vulnerability because practically everyone drinks. How are persons who are slipping into trouble because of intemperate drinking to identify the danger when all those around them are apparently drinking just as much? So the problem of getting people to accept the fact that they need help remains a considerable one. Some objective indicators are being developed that may make early recognition and its acceptance somewhat more probable.

Social drinkers have few guidelines to indicate when they are in jeopardy as their consumption increases. Conforming to Anstie's rule—"no more than two average-sized drinks a day, and no saving up the daily allowance to go on a binge"—predictably will not produce any impairment over the years. However, many people in this culture drink more than this amount and appear to do well over time. How can a person tell when his or her personal danger zone is reached? The reasons for drinking and one's behavior while drinking enter into the equation along with other contributory variables.

Even two drinks a day are too much for some people. Those prone to pathologic intoxication, hypersensitivity to alcohol, and certain diseases are impaired at minimal levels of drinking. No absolute quantitative limit divides the functional from the dysfunctional drinker.

It will take a quantum shift in attitude by those at risk and their significant others to make incipient alcoholics easily identified and cooperating clients. Somehow, drinking too much, intoxicated comportment, not being able to remember what happened during a drinking bout, and behaving poorly while drunk time after time are not considered dysfunctional conditions by many people. Because these conditions are evoked by a chemical in common use, it is often very difficult for people to acknowledge that a serious situation exists. In fact, in large amounts, ethanol produces behavioral and cellular toxicity. When this fact comes to be accepted by everyone, the resistance to dealing with alcohol as a disability-producing drug might recede.

The problem is not a simple one; it cannot be defined by the quantity of ethanol ingested. Some people are impaired by amounts of alcohol that others seem to consume without difficulty. In this country, certain occupational and social groups imbibe heavily and consistently. Some members of such groups develop medical or psychosocial problems early. Others seem to go on indefinitely apparently without incurring alcohol-related adverse effects.

High-Risk Populations

A number of groups are more vulnerable to becoming alcoholics, and primary and secondary prevention efforts for these high-risk groups are a logical way to reduce pathways to chronic alcoholism. In each person multiple causes can be identified (Vaillant 1980). In this section a number of the more evident predisposing causes are briefly mentioned.

Genetic and Familial

It is now quite well established that a genetic component exists in some instances of alcoholism. Alcoholism is not an inevitable genetic certainty, but an additional vulnerability does exist.

In addition to any hereditary factor, the disturbed family existence when one or both parents are alcoholic seriously impairs the child's psychological development. Physical abuse, neglect, negative role models, and a chaotic day-to-day existence are only a few of the disabling conditions to which such a child is exposed (Wegscheider 1979).

Alcohol is also a teratogen. If it is consumed in large amounts by a woman during pregnancy, a variety of mental and physical defects can emerge in the offspring (U.S. Department of Health, Education, and Welfare 1978). Such a child is less able to cope with the difficulties inherent in an alcoholic household, where considerable conflict and deprivation usually exist. For these reasons, efforts should be made to help the child or adolescent living in such circumstances (Chafetz et al. 1971; Gottheil et al. 1977; Zucker 1974). (The support systems proposed or available are noted in the paper on "Services for Children of Alcoholic Parents" in this volume.)

Groups Under Stress

Heavy drinking as a response to longstanding stress is a well-recognized coping technique. That it is successful only during the period of acute intoxication and actually compounds the stressful state when used consistently is evident, but this does not reduce the common practice of drinking to deal with life stress. Only a few groups will be mentioned here to demonstrate the interaction between the excessive use of beverage alcohol and living a stressful existence.

People undergoing rapid cultural change and those in conflict with the dominant culture are under considerable pressure, and some respond by escaping into intoxication. The American Indian may be representative of a society whose traditions have been shattered and whose present lifestyle on and off the reservation promulgates excessive drinking (Burns et al. 1974).

The fact that large numbers of armed service personnel are young, male, and away from home is sufficient reason to expect high levels of alcohol consumption in this group. Also, heavy drinking is an approved

and socially rewarded activity in this setting (Schuckit 1977), with service clubs holding "attitude adjustment hours" with low-cost beverages. Boredom during peacetime and impending dangers of combat during war also contribute to episodic excessive drinking.

It might be expected that the unemployed would have low rates of problem drinking because of their lack of funds. On the contrary, this group seems to find the money for cheap wine even when food is in short supply. Feelings of hopelessness, loss of self-esteem, and time on their hands combine to make drinking a substantial problem among the unemployed.

The changing role of women has produced increasing problems with alcohol (U.S. Department of Health, Education, and Welfare 1978). Whether or not an increasing number of women are becoming problem drinkers or alcoholics is unknown. Women seem to be seeking out treatment earlier and in larger numbers than in the past. Thus, what seems to be an apparent increase may be an artifact of greater visibility.

Occupations with Traditional Heavy Use Patterns

Brewery employees, bartenders, food service personnel, and other workers with ready access to beverages containing alcohol at no or low cost are prone to excessive drinking (Roman 1975). Certain trades have customarily been high-consumption occupations; painters, construction workers, and longshoremen are a few examples. Physicians become involved in alcohol overuse at a rate higher than that of the general population (Glatt 1976). Physicians impaired by alcohol are a risk, not only to themselves but also to their patients. They also become the target of drug-dependent people for supplies of sedatives, stimulants, and narcotics.

Those with Certain Social/Interpersonal Problems

The person arrested for driving while intoxicated (DWI) is believed to be an excellent candidate for secondary prevention efforts (Filkins et al. 1975; Fine and Scoles 1976). (See also the paper in this volume on drinking and driving.) Surprisingly high percentages of these individuals have received psychiatric diagnoses after testing and psychiatric evaluation (Mulligan et al. 1978). Many in the DWI group are considered to manifest aggressive irresponsibility (Clay 1974; Sandler et al. 1974), which becomes overt in their driving behavior. Highly selected subgroups of the DWI population may be amenable and responsive to therapeutic intervention. A related, perhaps further advanced, cluster of people are those who have one-car accidents (Tabachnick et al. 1973). A large number of these people have elevated blood alcohol levels (BALs) at the time of the accident.

Characteristic of the employed abusive drinker is a record of absenteeism, multiple accidents, more than the average amount of time off for illness, and frequent job changes. Poor job performance is

characteristic of the emerging or overt problem drinker (Hawker 1973). Employee confrontation is important for both the employee and employer. Some of the best treatment results have been reported from occupational alcohol programs (von Wiegand 1974).

Those with Certain Medical-Psychiatric Disorders

Depression and similar mood shifts, e.g., grief reactions, loneliness, and boredom, are often self-treated with alcohol. The interaction of alcohol and depression is not a simple one. Depression may induce alcoholism and vice versa. Treatment of the primary depression is a major part of the management of alcoholics. Chronic schizophrenics are believed to be overrepresented in the alcoholic population, although this has not been invariably confirmed (Rimmer and Jacobsen 1977). Drinking may constitute an effort to self-treat the disorder. Those with antisocial personality disorders tend to drink inordinately as a part of their lifestyle (Fowler et al. 1977).

Patients in methadone maintenance programs occasionally have problems with excessive drinking (Cohen et al. 1977). The intoxicated state may be a substitute for the opiate euphoria that is no longer easily achievable.

Of course, people in chronic pain are at risk of becoming alcohol dependent because of their distress. If insufficient relief is achieved with analgesics, alcohol may be added in the search for help. Paraplegics are at risk, not only because of noxious body sensations but also because of the substantial physical disability that affects their emotional states.

People with Alcohol-Associated Diseases or Symptoms

Individuals with illnesses that may be caused by excessive drinking are proper candidates for early intervention (Lieber 1978*b*). Conditions such as gastritis, fatty liver (Levi and Chalmers 1978; Lieber 1978*a*), and diarrhea are often manifestations of excessive use of beverage alcohol. Other conditions that may accompany the excessive use of alcohol include high blood pressure, certain anemias, and early neuritic symptoms.

Some symptoms that occur relatively early in a drinking career should arouse suspicion (Block 1973; Girard and Carlton 1978). Blackouts, i.e., the loss of memory for a period of time when the person was apparently functioning well, can appear early, not necessarily after brain damage has occurred. Complaints of insomnia, especially broken sleep, may relate to heavy drinking episodes. The insomnia might produce increased nocturnal consumption as a means of dealing with it. Impotence and, later, loss of libido are possible evidence that alcohol abuse is producing significant changes in sexual drive and in the ability to perform.

People with Alcohol-Related Signs

A number of manifestations of midlevel drinking may be present in people seeking assistance for other conditions. A puffy face and rosy cheeks and nose are possible indicators. Sometimes the tongue is chlorophyll coated in an effort to disguise the odor of ethanol. Cigarette burns between the fingers or on the chest could mean that the person had fallen asleep in a drunken stupor. A fine tremor of the tongue or outstretched hands may reflect overindulgence. These symptoms are not the "shakes," which is a sign of the withdrawal syndrome.

Helpful Diagnostic Tests for Dysfunctional Drinking

A carefully elicited history and a physical and mental examination are excellent methods for evaluating drinking habits. Careful, sensitive inquiries should be made of the drinking history (Davis 1978; Kulisiewicz 1973; Louria et al. 1976; Seixas 1974). Sometimes the spouse can contribute essential information. A number of self-administered alcoholism assessment tests can be of assistance in this determination. One of the more popular questionnaires is the Michigan Alcoholism Screening Test (MAST) (Selzer 1971). This is a 24-item test that takes about 15 minutes to administer. A score of 4 suggests possible alcoholism and higher scores are presumptive evidence of alcoholism. A brief MAST has been developed by Selzer et al. (1975). A variety of other tests are also available (Jacobson 1976; Jones 1979).

The most sensitive current laboratory test for early liver changes is the gamma glutamyltranspeptidase (GGT) (Teschke et al. 1977). It is not specific for alcohol-caused liver injury, but the other causes can readily be eliminated. Other tests may contribute information (Whitfield et al. 1978). These include other liver enzyme tests, triglycerides, alpha aminobutyric acid levels (Lieber 1978a, b), and enlarged red blood cells (macrocytosis), usually determined by measuring the mean corpuscular volume (Levi et al. 1975).

Although the BAL only relates to very recent drinking, Morse and Hunt (1979) believe that anyone coming in for a medical examination with a BAL of more than 100 milligrams per deciliter, or with a BAL of 150 milligrams per deciliter without signs of intoxication (tolerance), or with a BAL of more than 300 milligrams per deciliter at any time has presumptive evidence of alcoholism.

Very recently, Ryback et al. (1979) developed a statistical method for using the standard laboratory tests that are routinely taken on admission to a hospital, or done in a doctor's office, to make a diagnosis of alcoholism. The 25 tests of the SMA-12, SMA-6, and a complete blood count are processed by means of a quadratic discriminant analysis. This technique is not yet available for routine use, but should become a clinically valuable adjunct.

Detection Strategies

Social drinkers utilize internal and external cues to maintain moderate consumption levels. One method is to simply count the number of drinks and stop before, or at, one's limit. The amount imbibed can also be controlled by internal information feedback that estimates how high one feels, or whether any evidence of slurred speech, poor judgment, or gait incoordination is perceptible. Another method of control, when questions arise about the actual quantity imbibed, is to keep a careful alcohol intake diary. In it each alcoholic beverage consumed is promptly set down along with the quantity, the setting, the reason for drinking, and the effects.

Ideally, individuals who use a chemical like alcohol with known harmful high-dose effects should periodically scrutinize their own drinking patterns: how much is consumed, why it is used, what the effects are, and what visible impairment in functioning may be taking place. Unfortunately, this is rarely done. The nature of the transition from years of social drinking to problem drinking is often so gradual that no detectable change is perceived. The person may encounter a stressful period, increase intake, and then continue at the new level of imbibing after the crisis has passed. Such incremental, or stepwise, increases in drinking do not require a conscious decision about drinking too much. An amount or pattern is eventually reached that can be called dysfunctional drinking.

Affirmative answers to any of the following questions are evidence of incipient or actual problem drinking (Cohen 1979).

1. *Do I get drunk when I intended to stay sober?* This question speaks to early loss of control over one's drinking.
2. *When things get rough do I need a drink or two to quiet my nerves?* Using alcohol as a tranquilizer can be precarious because the dose is difficult to adjust and no other person is supervising the medication.
3. *Do other people say I'm drinking too much?* If the negative effects of drinking are evident to more than one person, or to a single person on a number of occasions, this means that one's behavior is exceeding the social limits.
4. *Have I gotten into trouble with the law, my family, or my business associates in connection with drinking?* Being arrested for drunk driving or for drunk and disorderly conduct is a sign of excessive drinking. Being confronted with difficulties at home or at work tends to be the cumulative effect of a long series of objectionable behaviors.
5. *Is it not possible for me to stop drinking for a week or more?* Resolving to stop but not being able to carry it off indicates a definite psychological or physical dependence and reflects a serious loss of control.

6. *Do I sometimes not remember what happened during a drinking episode?* Blackouts due to alcohol consist of variable periods of amnesia for what happened during the drinking bout.
7. *Has a doctor ever said that my drinking was impairing my health?* Although it is now possible to pick up early evidence of harmful drinking, by the time a medical examination reveals abnormalities attributable to alcohol, it is clear that continuing to drink as before will further damage one's health.
8. *Do I take a few drinks before going to a social gathering just in case there won't be much to drink?* Assuring oneself of a sufficient supply of alcohol "just in case" is evidence of an unhealthful preoccupation with alcoholic beverages.
9. *Am I impatient while waiting for my drink to be served?* The urgency to obtain a drink or gulping drinks reflects a craving.
10. *Have I tried to cut down but failed?* This is more evidence of loss of control.
11. *Do I have to have a drink in the morning because I feel queasy or have the shakes?* The relief obtained from a drink after arising is apparently due to the relief of early, mild withdrawal symptoms.
12. *Can I hold my liquor better than other people?* Being able to hold one's liquor is not necessarily evidence of freedom from the complications of drinking. It may indicate the development of tolerance due to the persistent consumption of large quantities.
13. *Have many members of my family been alcoholics?* People whose parents or siblings have had serious problems with alcohol have reason to be more watchful of their own drinking habits.

Feasibility of Early Intervention

During very recent years we have been witnessing a dramatic cultural shift: many prominent people have admitted that they were impaired because of their overuse of alcohol. Many Congresspersons, business executives, actors, and sports figures have come forth and candidly admitted their problems. For purposes of early intervention, the instance of Betty Ford is appropriate. From her book (Ford 1978) it is clear that she was experiencing incipient drinking problems. It took a group intervention by family members and a physician to persuade her that something was wrong and that a complete revision of her pain medication and cocktail habits was necessary. Because of the high visibility of the people who refused to conceal their problem, many others are openly seeking help before chronicity and irreversible disability set in. Perhaps for the first time, a greater number of early stage problem drinkers has become available for treatment.

Except for those that have no cure, all disorders are most successfully dealt with during their prodromal phases. Residual damage is negligible. Chronicity has not taken place, and ingrained responses to the long-term disorder are not yet fixed and unalterable. Chronic alcoholics may no longer be able to cooperate in their recovery because of irremediable mental deficits. Should a remission occur, the residual impairment may be considerable. Therefore, earlier detection and treatment represent a more appropriate goal. (Though it should be noted here that controlled studies comparing the treatment of early intervention with that of alcoholism and problem drinking have not yet been done.)

If a consequential program is to be directed at the abusive drinker whose life has not yet been seriously damaged, a key role will be played by gatekeepers. These are people in contact with candidates for intervention. Through increased awareness and, perhaps, training, they could guide more emerging problem drinkers into a treatment situation (Schneider 1976). The gatekeepers who help most drinkers in trouble are noted in figure 2. Less conventional gatekeepers would include bartenders and other servers of liquor (Good 1975; Verdone 1975). Attempts have been made to use outreach workers to engage individuals or groups at risk. These workers are usually recovered alcoholics who are well aware of the self-deceptions and evasions that the impending alcoholic uses.

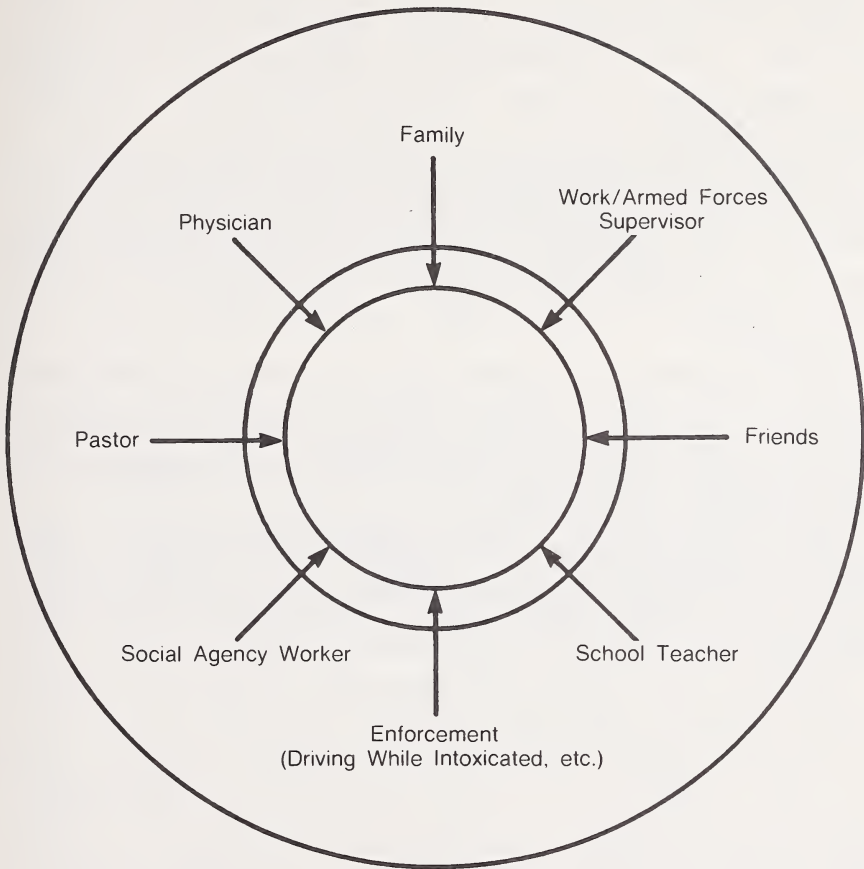
Crisis intervention would seem to play a key role in early identification and in encouraging the move into treatment. A desire for change and the likelihood of changing one's behavior are greater in connection with a life crisis. Those who run facilities through which people in crisis are channeled should be made aware of this opportunity.

Barriers to Early Intervention

The barriers to intervening early in the course of a career of excessive drinking are considerable. The patient, the treater, society itself, and the treatment situation all set up barriers to engaging the dysfunctional drinker. Client denial and rationalization are common problems. These may be so complete that even in preterminal cirrhosis, the person may still not accept the relationship between drinking and the current grave health situation. It is all the more difficult to accept prodromal signs of problem drinking as a reason to change one's drinking behavior.

Another barrier may be the attitude of friends, neighbors, and family. They, too, may refuse to recognize the danger signals for a long time and be reluctant to deal with the problem until it becomes flagrant. Their stereotype of alcoholism may be that of the skid row derelict, and if the

Figure 2. The Gatekeepers



person is still managing to function, however poorly, nothing might be said or done to try to help.

It is undeniable that our social attitudes toward excessive drinking are ambiguous, ambivalent, and antitherapeutic and that these attitudes are constantly being reinforced by the media. It is difficult to visualize successful intervention strategies without a concurrent change in the drinking stereotypes that are abundantly presented to all age groups by the media. The pervasive messages that drinking will deal with stress, that drunkenness and the DTs are funny, and that alcoholic beverages are a part of growing up are counterproductive to ideas of moderation and the avoidance of alcohol-related problems.

Another obstacle to early intervention is the persisting notion that, before alcoholics can really be motivated to surrender their ingrained drinking habits, they must "hit bottom." Some may have to be confronted with a total personal disaster before they develop sufficient resolve to stop abusing alcohol. By then, though, brain damage may be irreversible. Therefore, casefinding and engagement in treatment during the incipient stages of problem drinking rather than the end stages should be the goal.

Some physicians may have an unwillingness or an inability to diagnose the prealcoholic states (Lisansky 1973). This is especially true if their own drinking characteristics resemble those of the patient being evaluated. Other physicians are reluctant to become involved in the treatment of the alcohol-abusing patient. This is acceptable as long as proper preparation and followthrough of a well-thought-out referral are accomplished.

Many candidates for early treatment are lost because of holes in the referral-treatment network through which persons with lesser degrees of motivation escape. Every effort should be made to impress these persons with the importance of obtaining help and to assure that the referral has been consummated.

The treatment opportunity might be missed if the counselor or other treatment specialist does not make special efforts to engage and keep the client in treatment. Alcohol treatment programs tend to have poor retention rates, and each program should carefully study the reasons for client loss.

Baekeland and Lundwall (1977) presented a pessimistic picture of alcohol treatment. They stated that the vast majority of alcoholics remain undetected and thus do not receive treatment or receive it only when their condition is far advanced. If referred for treatment, a high percentage of alcoholics fail to negotiate the leap from referral source to treatment facility. Once in treatment, the alcoholic is likely to drop out quickly. Finally, among the variety of treatment approaches available, it is by no means clear which is most appropriate for a given patient.

Treatment and Early Intervention

It is necessary to recognize that differences exist in managing early versus late intervention. In early intervention the client must be made aware that a potentially serious life problem exists and that changes in drinking behavior must take place. All excuses and unwillingness to accept the evidence of future deterioration of the economic, social, health, or family situation must be carefully explained and thoroughly understood. The fact that many people experiencing problems with drink deny them requires discussion, and all rationalizations should be thoroughly dealt with.

The goals of treatment should be carefully defined with the understanding that a lifelong change must be made and continued. Some of these people may be able to resume social drinking in the future under supervision, others may have to remain abstinent for the remainder of their lives. The difficulty of correctly identifying who will succeed in drinking socially makes abstinence for all a reasonable decision.

An examination of the reasons for a person's excessive drinking will dictate some aspects of the therapy. If it occurred in response to stress, then the stressors should be examined and eliminated, or techniques for dealing with them taught. Family therapy will often be indicated, and groups will provide mutual insights and support. All of the ancillary therapies will have contributions to make in individual cases.

Summary

The concept of early intervention for those entering into or engaged in drinking practices that will result in a disturbance of some aspect of their existence is rational and necessary. However, substantial problems exist in identifying those at risk, getting them into treatment, and retaining them in treatment. Personal and societal barriers to the early correction of dysfunctional drinking practices will be difficult to overcome. A basic change in our cultural attitudes toward alcohol will be required before a major movement toward early intervention becomes a reality.

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Chapter 5

Services for Children of Alcoholic Parents

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Abstract

At least 12 million American schoolchildren have alcoholic parents, and millions of adults continue to suffer the consequences of parental alcoholism without understanding its relationship to their problems. Children of alcoholics appear to be at significantly greater risk than other children to develop a variety of dysfunctional behaviors. Research has definitively documented some of these risks, while others are based largely on widespread clinical observation. There is a great need for further study of this population, but research has been impeded by the same obstacles which account for why about 95 percent of children of alcoholics never receive help specific to their central problem.

The children have their own needs; they are not treated simply in order to help the alcoholic recover, although they can be potent catalysts of positive change in the family. One approach to helping the children is conjoint family treatment for alcoholism. A second approach centers on group work with the children of patients. A third begins with the children, seeking to reach and help them whether or not their parents are in treatment or support their getting help. There are philosophical, practical, legal, and ethical dilemmas involved in each approach.

The overall goals of early intervention with children of alcoholics are to minimize the harmful consequences of parental alcoholism for the child and to help the child introduce or support positive change in the family. Ten concrete objectives are offered toward the realization of those goals, together with their implications for how effective programs might be designed.

Only a handful of programs appear to be working with children of alcoholics in any numbers and duration of time. Some of the important similarities and differences among these programs are discussed. The intervention process is divided into five steps, and the strategies used at each stage by the exemplary programs are described.

Introduction

Professionals involved in the treatment of alcoholism consistently refer to it as a family disease. The belief is widespread that the typical alcoholic's drinking seriously affects the lives of about four other people. Yet in spite of virtually uniform subscription to this premise, children of alcoholics remain largely untouched by helping services.

Current estimates of the number of American school-aged children living with parental alcoholism are imprecise, sometimes simply extrapolated from demographic data collected from alcoholics in treatment. The most conservative estimates put the number of children of alcoholics at 12 million; others range as high as 25 million. In any given classroom in the country it may be assumed that 4 to 6 of every 25 children come from alcoholic homes.

These children are naturally as diverse, in terms of their class backgrounds, geographic locations, and cultural and ethnic origins, as their parents. And though further study is needed, it is becoming clear that they are also extremely diverse in their academic achievement and social behavior.

It should be added that in certain communities which have exceptionally high rates of alcoholism (Native American, as one example), children of alcoholics may outnumber those from nonalcoholic households. It remains to be studied whether alcoholism affects children differently when it is virtually a normative community pattern, in contrast to its being identified more clearly as deviant behavior.

In addition, it is clear that alcoholic parents do not cease to affect their children adversely when children mature and leave the home. Young adults from alcoholic homes frequently retain adaptive styles and personality characteristics which they have developed in order to survive. Some are strengthened by their experience, but a great many are debilitated, and continue to have problems with interpersonal relationships, work fulfillment, or physical health. Most are unaware of the relationship between their parents' alcoholism and their own adult problems. This paper concerns itself with efforts to reduce the harmful immediate effects of family alcoholism on children and the long-term risks they will face as adults. In addition to strategies which make family alcoholism comprehensible to children, information and resources must be systematically provided to adult children of alcoholics.

The Consequences of Parental Alcoholism on the Child

Research is only beginning to document clinical observations of the effects of family alcoholism on children. The obstacles which have prevented large-scale treatment of these children, described in the next section, have also impeded research efforts. Most studies which have

been reported have involved children whose parents have reached (though not necessarily maintained) treatment, an obviously skewed sample to begin with. Those unique programs which reach large numbers of children with parents not in treatment have been understandably averse to confronting these youth with threatening questionnaires or psychological tests.

Furthermore, few studies have undertaken to observe the impact of maternal/paternal alcoholism as it affects male and female children, clearly potent variables where family dynamics are concerned. Data are particularly scarce on the effects of maternal alcoholism, although there is every reason to suspect its impact to be more severe than paternal alcoholism, especially for boys (Richards 1979*b*). The effects of single-parent alcoholism, the long-term removal of the alcoholic from the home, the death of the alcoholic: these are all facets of parental alcoholism which are virtually untouched by research.

The limited research which has been reported has tended to confirm that children of alcoholics are at greater risk than other children in the following areas.

Alcohol and Drug Abuse and Alcoholism

Most of the studies on the drinking practices of children of alcoholics are retrospective. This method has serious drawbacks. Nevertheless, the data strongly indicate that children of alcoholics are significantly more likely (Goodwin et al. 1973 describe them as twice as likely) to develop an alcohol problem as children of nonalcoholics.

Perhaps the most convincing data come from a longitudinal study of 450 Boston men followed over a 40-year span (Vaillant 1979). In contrasting those young subjects who were later diagnosed as alcoholics with those who went on to abstain or drink without incident, three significant variables related to alcoholism were discovered: growing up in an alcoholic environment, having a number of biological relatives with alcoholism, and belonging to an ethnic group (Mediterranean in origin) which introduces children to drinking early within a family context but has strong negative sanctions against drunkenness.

When compared with children from other family backgrounds (including those whose parent had died or was mentally unstable), there was a significantly higher rate of alcoholism among (1) those who had lived in an alcoholic environment but did not have biological relatives, such as parents, uncles, aunts, and grandparents with the disease (for instance, they lived with an alcoholic stepparent, surrogate, or guardian); (2) those who did not live in an alcoholic environment, but did have a number of biological relatives with alcoholism; and (3) those who had alcoholic biological relatives and did live in an alcoholic environment. The alcoholism rate was significantly lower among those of Mediterranean background.

This study, not yet published, points to an etiology which combines heredity and environment. The relative strengths of these twin influ-

ences are unknown. But if we know that children of alcoholics, and those who live with alcoholics, are at substantially greater risk of developing alcoholism than other children, then they must be educated about their risk and encouraged to minimize it, just as those with greater risk of diabetes or high blood pressure must be educated about special precautions.

If children of alcoholics are more likely to abuse alcohol and drugs they are logically more apt to engage in other behaviors associated with substance abuse. Crimes against both person and property, particularly those for which juveniles are most frequently arrested, are highly correlated with substance abuse (U.S. Department of Justice 1972). While there has been little formal research on the proportion of court-involved youthful problem drinkers who come from alcoholic families, two recent surveys found that more than 75 percent of such offenders had at least one alcoholic parent (DiCicco 1979; Whitfield 1979).

Psychological and Emotional Problems

Children of alcoholics typically feel some mixture of guilt, worthlessness, anger, hopelessness, and fear in their home situations, and generalize these emotions in their contact with the outside world, with predictable consequences. Some of the mental health problems believed to be associated with parental alcoholism are:

Poor Self-Concept

Few studies have been undertaken to document this common clinical observation. Self-concept in children of recovering alcoholics has been compared with that of children of active alcoholics, with inconclusive results, possibly due to differences in minimal length of sobriety (McLachland et al. 1973; O'Gorman 1975).

Psychosomatic Complaints

Children of alcoholics were found to be more likely to be admitted to in- and outpatient care with complaints for which no organic basis could be discovered. Girls complained more of stomach pains, anxiety, fatigue, and sleep disorders, while boys experienced more speech disorders, hyperactivity, and bowel incontinence (Nylander 1960).

Impaired Sense of Reality

Again, researchers are only beginning to explore this clinical finding. Preliminary evidence indicates that children with alcoholic mothers are more seriously affected in this regard than those with alcoholic fathers (Richards 1979b). Clearly, the atmosphere of denial which characterizes the alcoholic family both internally and in relation to the outside world can be expected to confuse the child's perception of what is real.

Suicide, Chronic Depression, and Other Serious Psychiatric Problems

Studies have shown that children of alcoholics are more likely to be suicidal (Kearney and Taylor 1969), and one report states that an astonishing 80 percent of adolescent suicides were children of alcoholics (Whitfield 1979). Other studies confirm a greater likelihood of serious psychiatric diagnoses including chronic depression, a tendency toward paranoid thinking, emotional detachment, and social aggression (Fine et al. 1975; Kearney and Taylor 1969; Rouse et al. 1973).

Difficulties in Interpersonal Relationships

Studies have corroborated clinical findings of social isolation and inordinate aggression, as well as marked tension and competition among siblings (Cork 1969; Fine et al. 1975; McLachland et al. 1973).

Physical Health Problems

Some research has pointed to a high incidence of hyperactivity among children from alcoholic homes (Cantwell 1972; Goodwin et al. 1975; Morrison and Stewart 1971). In addition, recent research on the fetal alcohol syndrome (FAS) and alcohol-related birth defects indicates hazards to the child resulting from a mother's excessive use of alcohol. The relationship between a father's heavy drinking and problems in conception and fetal development is still unknown.

Physical Neglect and Abuse, Including Sexual Abuse

This is doubtless the most sensitive of all topics to research. One French study found alcoholism a factor in 82 to 90 percent of reported cases of battered children (Mainard et al. 1971), and a recent study found 69 percent of abuse and neglect cases to be related to alcohol abuse (Behling 1979). Three recent studies of incest and sexual abuse reported high incidences of alcohol abuse in incestuous fathers (Browning and Boatman 1977; Rada et al. 1978; Virkkunen 1974).

In light of the marked tendency shown by victims of physical abuse to repeat such abuse with their own children, family alcoholism can be seen to contribute not only victims, but also perpetrators of this intergenerational damage.

Failure to Complete Schooling

Children of alcoholics have been found in disproportionate numbers among those who perform poorly in school, attend irregularly, and eventually drop out altogether (Lindbeck 1971). These characteristics appear to be natural consequences not only of the factors described earlier, but also of the realities of daily living which these children face. For instance, many are preoccupied with their parents' well-being and are unable to concentrate; they are frequently tardy or absent because

they must fulfill the alcoholic's responsibilities; they are exhausted after nights spent listening to their parents' arguments; they do poorly in school as a way to get their parents' attention or the school's help; and they often lack a quiet space in which to do homework or just read. School problems often translate into subsequent unemployability, with all of the concomitant features of that chronic condition.

Tendency to Choose an Alcoholic Spouse

People often build a home life which resembles the life they knew as children, and clinical evidence strongly suggests that this is true for children, particularly daughters, of alcoholics. What little research has been done on this characteristic has confirmed this observation (Bailey et al. 1965; Clifford 1960).

Strength and Competence, Real and Apparent

Finally, it should be noted that some children emerge from alcoholic families with survival skills, tenacity, and endurance which other children never manage to develop. Working with children of alcoholics should include discovering and building upon these strengths. However, in one type of child, the superachiever or "family hero," real strengths can completely obscure real, and usually undetected, needs. These children often derive no satisfaction from their school and career success, since success originally had little intrinsic value, but was merely a strategy designed to stop the parents' drinking. They have an apparent tendency toward compulsive overworking and perhaps early death, particularly of coronary thrombosis (Booz-Allen & Hamilton 1974; Hecht 1973; Whitfield 1979). These children deserve special mention because they rarely ask for help and are generally presumed to be exemplars of healthy adjustment.

Reasons for Current Lack of Services

By far the greatest stumbling block to serving children from alcoholic homes is identifying and reaching them. Adolescents in general are notoriously difficult to engage in therapeutic relationships. Children with family alcoholism, with their shame, fear, guilt, and despair, are not about to inundate treatment resources, asking for help in response to superficial messages on television or in printed materials. Furthermore, many children run the risk of physical punishment and worse if their parents were to find out that they had revealed the family secret of alcoholism. Therefore, resources which rely on parental permission or transportation by the parent preclude widespread use. Then, too, most children need protection from their peers, and will not accept help if it in any way exposes them as children of alcoholics.

Postponing for the moment consideration of ethical and legal issues, the children's highly justified resistance to identification creates its own dilemma. Young children, including preadolescents, may be more open to talking about how a parent's drinking makes them feel, but they are less physically accessible; teenagers are better able to get to services, but are more confirmed in their secrecy, anger, and professed indifference. For these reasons most of all, professionals in the field seem to agree that no more than 5 percent of these children reach any form of treatment. The great majority of those who do are reached *after* their alcoholic or nonalcoholic parent has sought help.

Because the children learn and practice the denial characteristic of alcoholic families, even the most effective treatment resource cannot be expected to attract more than a small percentage of children on the basis of self-identification and self-referral. Systematic help for this population depends on aggressive intervention by those who have frequent, natural, trustful contact with children. The ideal intervention agent is one who has the opportunity to introduce the subject of drinking and alcoholism, instead of having to wait for the child to introduce it.

The second most formidable obstacle to systematic programing for children of alcoholics is the absence of this network of trained professionals and peers. Incredibly, advanced training in education, social work, psychology, theology, medicine, and nursing almost never examines the effects of alcoholism on children. Training practitioners of these disciplines can be even more problematic because of their lack of time and incentive; and there is certainly no surplus of people equipped to do such training.

Professionals' biases about alcoholism and about helping tend to make them refrain from seeking or accepting training in family alcoholism (Deutsch 1981; DiCicco and Unterberger 1977). To begin with, many of those who have lived with family alcoholism have never resolved their feelings about it and are repelled by the subject; and some of those who have never experienced it do not perceive it as a major problem. The tendency to see alcoholism as the parents' problem leads those who work with children to define the subject as outside of their proper realm. This tendency is exaggerated by the belief that the child cannot be helped except through the parent's sobriety. The professional is also subject to society's emphasis on privacy at all costs, equating "probing" with "prying." Whether these beliefs are a credo or an excuse for avoiding emotional situations, many people in personal and professional capacities make a rule of waiting for a troubled child to reveal his or her problems and ask for help.

Adequately trained staff who deal with youth are aware of family alcoholism as a problem affecting significant numbers of the youth with whom they are involved. They are motivated and committed to a limited intervention role, viewing that role as part of their professional or personal responsibilities. They have sufficient administrative support to feel safe in discussing family alcoholism with children. They also have realistic goals and expectations and concrete strategies.

Even trained persons are justified in avoiding the subject of family alcoholism with the children they see, if there are no respected resources to which they can be referred. For staff persons must be guaranteed that their role, while crucial, will be limited. Therefore, the development of a network for identification and referral must be virtually simultaneous with the establishment of resources for treatment.

Here we have a third reason for the lack of services. In most communities, treatment resources adapted to the specific needs of children of alcoholics are either nonexistent, or they are inaccessible to all but a few children who have parental support. In large part because the population has been so inaccessible, there has been little consensus about what treatment should accomplish and how it may succeed. Few human service workers are being trained to work with children of alcoholic parents. Innovative models will be described in later sections; clearly many strategies are untried and untested. The attempt to serve children of alcoholics is in its infancy both conceptually and practically, and new ideas for treatment are needed even as the most promising current strategies are replicated.

As always, the ultimate reason that more has not been attempted to date is a lack of funds. National policymakers for alcoholism control efforts have only recently allocated money for programs which deal specifically with children of alcoholics, and that allocation remains a trifling percentage of the funds spent on the illness. Local sources of support characteristically favor treatment of current problems over prevention of future problems. Alcoholism treatment facilities are hard-pressed to attend to their large numbers of alcoholic patients; many have the desire, but not the capacity, to serve family members.

Philosophical and Ethical Issues

Traditionally, alcoholism treatment has centered on the goal of helping the alcoholic to stop drinking. One underlying assumption is that the alcoholic's sobriety will gradually and almost automatically catalyze changes in the feelings and behavior of family members. Although it is now widely recognized that family members need their own intensive help, both to understand and satisfy their own needs and to support the alcoholic's recovery, the concept is more honored in theory than in practice. In many treatment programs, help for family members is grossly inadequate and remains focused on how they can best help the alcoholic.

As more is understood about family alcoholism, treatment has increasingly centered on the family as a unit. The family is viewed as a system in which all members evolve roles; and these roles, though they may be harmful to the individuals who play them, are accepted and even needed within the family to establish a modicum of equilibrium. The family then resists any change which disturbs that equilibrium,

sabotaging the alcoholic's recovery and any other family member's attempt to establish a new way of dealing with the home situation.

Conjoint family therapy may be extremely effective in the treatment of alcoholism. But in practice, it is often impossible; and when it does come about, it is inevitably the result of persistent instigation on the part of one or more family members who have been receiving prior individual treatment.

When family-centered treatment is initiated by the alcoholic parent or nonalcoholic spouse, there are noteworthy seeds for failure. First, if either parent has not sufficiently progressed in his or her own treatment and recovery, having the children reveal their feelings is often much too threatening. A number of alcoholism treatment programs report that parents frequently withdraw not only the children, but themselves, from treatment when they are pressured to involve them.

Second, when we remember the complicated feelings of anger and detachment which children feel toward their parents, combined with the natural thrust toward independence and rebellion which grows to its peak in adolescence, we may well ask whether a parent isn't the *least* likely person to bring a child for help. The discrepancy between the number of children in Alateen and the number of adults in Al-Anon and AA can be attributed to both of these tendencies.

The child-centered approach to family alcoholism begins with two assumptions. The first is that children can be helped to understand their feelings and change their behavior within and outside of the family, whether or not parents are involved in treatment. Parents need not approve of the child's receiving help; often they need not know at all. The second assumption is that children can be as effective as their parents as catalysts of family treatment.

Saying that a child cannot truly be helped unless the parent is in treatment is like asserting that the child whose parent is dying of cancer can be helped only by the surgeon. Children are about the business of defining themselves with respect to their parents—identifying at some ages, separating at others. Developmental stages have important bearings on treatment goals and outcomes, but in general children are learning what they can get from their parents and where they can look, in terms of peers and other adults, for what they cannot get at home. They are highly susceptible. Too often they find negative models and influences; but if they find sympathetic help in sorting out their experiences, emotions, and needs, they may be considerably more responsive than adults who have a greater investment in keeping things as they are.

Children build their survival mechanisms instinctively, without their own or their parents' understanding. Why, then, can't they be expected to examine, evaluate, and change some of those patterns without parental cooperation, perhaps even in the face of actual opposition? As adults, we grossly underestimate young people, their resiliency, and also their capacity to understand and change.

In the untreated family, children are the most accessible members. All children attend school or come to the attention of school authorities; there is no adult institution with a comparably systematic reach. It also appears that children may be more willing to accept help for themselves when their parents have no active role in that help, and even (or especially) when their parents oppose it. Their need for independence and protection from a family whose disease does them harm calls for resources outside of the family. They are more likely to trust such resources.

To be sure, there are risks involved in the child's being the only family member who refuses to maintain the family's alcoholic equilibrium. The young child in particular must be discouraged from confronting an alcoholic parent or otherwise endangering his or her safety. On the other hand, the physical and emotional risks of the child's ignorance are immeasurably greater. We cannot wait until a parent enters treatment to equip children to deal with the danger they presently face.

Finally, if the child were the first instead of the last involved in treatment, we might well see more family therapy for alcoholism (Bosma 1975). Many alcoholics report that they reached treatment only after they perceived what their drinking was doing to their children.

Legal and ethical considerations are sometimes offered as obstacles to a child-centered approach to family alcoholism. A review of the statutes and legal precedents suggests that the legal liabilities inherent in counseling minors without or against their parents' consent are minimal and remote (McCabe 1977). In fact, recent trends have strengthened the child's right to services and ultimately increased the juvenile courts' ability to mandate such services. Furthermore, the distinction between education and advice, which in many communities and contexts do not require consent and adequate disclosure, and counseling, which may require it, is unclear and may serve to protect the intervention agent. Particularly when the child asks for or shows the need for help, the legal risk to the helper seems more imagined than real. However, most potential helpers don't know that this is the case, and need to be reassured. In the end, their most useful reassurance comes from supportive administrators and community groups rather than from courts of law.

Goals of Early Intervention

The term "intervention" is an ambiguous one. In our view, it refers to a process, not an incident; and a process which is different from treatment in its goals, length of time spent, and level of skills which are utilized.

"Intervention" refers to the attempt to help children comprehend, both cognitively and affectively, the real nature of family alcoholism and its effects on their feelings, attitudes, and actions. When it succeeds, it

represents a vital turning point. Prior to intervention, most children of alcoholics hide or deny the family secret; disavow or harmfully act out their confused feelings; and emotionally isolate themselves from others. Intervention legitimizes their feelings and encourages them to develop new ways to express them. It seeks to replace an old foundation with a new one which keeps what is usable and builds on it. For the child's worldview, formerly dominated by denial, anger, guilt, and fear, it tries to substitute a new way of looking at the family, self, and the outside world. Once the child has recognized and accepted elements of this new vision, he or she may need more intensive, ongoing, psychologically oriented help to resolve the discrepancy between old and new thinking and behavior. More intensive help may be needed to address other emotional or behavioral problems that may have developed. "Treatment" refers to this sustained psychotherapeutic process.

"Early" intervention is a relative term. The intervention process should begin as early in the child's life as possible. In our experience, children at age 3 or 4 are frequently capable of expressing their deepest feelings and learning new ways to vent them; and they are certainly able to learn that their parent is sick, and to stay out of the way when the drinking begins (Deutsch 1981). But this is not to say that we have failed if the child isn't reached until he or she is 12, or 15, or older. With time, the adverse effects of family alcoholism may become more entrenched and difficult to change; but the child also gains other strengths, and may in fact be more driven to change at 16 than at 8. "Early intervention" simply reflects the desirability of helping children before they form self-destructive patterns.

Allowing for variations in emphasis depending on the age and circumstances of individual children, the objectives of early intervention with children of alcoholics are these:

1. *To establish a warm, caring, safe, and trustful environment.*
2. *To help children acknowledge and express their feelings.*
3. *To help children develop and strengthen a new way of understanding the illness of alcoholism and its effect on their families and themselves.* Understanding the illness concept in cognitive terms means understanding and believing that alcoholism is a treatable illness; that it is progressive; that family members are strongly affected; that there are options as to how to deal with it; and that help is available to them. In affective terms, it means counteracting feelings of isolation, shame, guilt, anger, rejection, helplessness, and confusion. Put most simply, the key concepts are:
 - You are not alone.
 - It's not your fault.
 - It's not the fault of the alcoholic or nonalcoholic parent; they love you, but they are ill.
 - The alcoholic can get better.
 - You need and deserve help for yourself.
4. *To promote new friendships and reduce social isolation.*

5. *To generate openness to formal and informal help*, including the help which new friends, who also may be children of alcoholics, can provide.
6. *To improve coping skills and reinforce new ways of venting emotions inside and outside of the home*. This process involves acknowledging existing patterns which seem to have nothing to do with alcoholism; denial, dishonesty, distrust, suspicion, negativism, self-abnegation, are common examples. Emphasis is put on ways to avoid arguments and violence, and on positive outlets for anger.
7. *To examine new images and ideas with respect to drinking*. Children must see the effect living with alcoholism has had on their notions of drinking, and perhaps on their drinking behavior. Models for responsible use of alcohol or abstinence, healthy and unhealthy reasons for drinking, and options one has in drinking situations are introduced, in the hope that these youngsters can begin to evaluate their own drinking and the drinking of others, using new and different criteria from those associated with their exposure to alcoholism.
8. *To provide models of consistency and responsibility, and the opportunity for the child to demonstrate responsible behavior*.
9. *To improve self-concept*. Children of alcoholics are often painfully aware of their deficiencies, but have great difficulty naming their positive qualities. In addition to persistent praise, intervention invites them to take honest pride in their strengths.
10. *To have fun*. For many children of alcoholics, laughter is a rare commodity. These children need and deserve relaxation and opportunities for having a good time. They are obviously more likely to sustain contact if they enjoy themselves.

We are a long way from proving that early intervention, by itself or leading to intensive treatment, reduces the incidence of the consequences of family alcoholism listed earlier. Thus, although we can list concrete and realistic goals for the intervention process, we do not yet know whether their accomplishment will result in healthier children and adults. In the short term, however, those programs which have worked with numbers of these children do indeed report changes which foster the belief that those consequences are preventable.

For many children there was a general improvement in home life: They hated less and accepted less blame; took better care of themselves and their siblings; and gradually withdrew from efforts to cover up the illness. Schoolwork and conduct improved, and delinquent incidents decreased. They made and kept friends and engaged in more social activities, in dramatic contrast to their previous isolation. Some drinking and drug-taking patterns changed. In a number of cases, other family members, including parents but especially younger siblings, were brought to treatment by the child who had been reached. And probably most marked was the change in openness about alcoholism and the ability to seek help. Some joined Alateen, some found counseling, and

many more retained contact with the intervention program and continued to seek help at times of crisis.

As more intervention is attempted with children of alcoholics, it is imperative that methods be found to assess the impact of this help which do not impede the ability to render it. Until that time, the intervention process will remain a controversial issue.

Requisites for Optimal Programing

Experience has increased our knowledge of the various symptoms and needs of children of alcoholics and of the obstacles that have inhibited our ability to serve them. It is becoming clear that to realize the objectives previously cited, programs should be designed with a number of characteristics in mind.

They must have a network capable of systematic identification and referral. That is, programs must be able to reach not only the children who show obvious signs of distress and those who ask for help, but also those who have always been overlooked by helping resources. The "Goody Two Shoes" child, or family hero, who does everything well and lives to please others, and the withdrawn child who does as he or she is told and tries to melt into the crowd, are neither more nor less in need of help than other children of alcoholics. Systematic identification and referral will result in intervention with these children as well as with those exhibiting problems.

Systematic outreach also entails *the capacity to involve children whose parents are not in treatment.* Obviously most children of alcoholics fit into this category and, if anything, their need is greater than those whose parents are receiving help. In supporting innovative programing for children of alcoholics, Federal, local, and private funding sources must require the development of this capacity.

Another criterion of a systematic intervention program is *its ability to reach and sustain contact with preadolescent children.* The minimum age at which intervention might best begin, both with and without parental support, is subject to dispute. But it is certain that intervention can effect meaningful and even lifesaving changes with children 6 and 7 years old. Methods and goals to reach and educate young children may differ considerably from those used with teenagers. The most effective programs are probably those capable of involving youth as young as 6 and as old as 20 years of age.

The most fundamental prerequisite for this kind of systematic outreach is the scrupulous *avoidance of stigmatizing the children who participate.* Whatever reasons the children may have for getting involved, they have compelling reasons for keeping away: the reactions they expect from their parents and their friends and peers. No program will be successful in reaching large numbers of children unless they can

see that participation is not generally recognized as a sign of family or personal problems.

But this does not mean that the solution is carefully cloaked intervention performed under cover of darkness. The last thing these children need is another secret they must worry about being discovered. In addition to avoiding negative stigma, *the intervention program must offer incentives, enticements, and excuses*, both in order to attract children initially and to enable them to keep coming in safety.

As mentioned earlier, the intervention experience should be enjoyable. *Relaxation and fun in a social setting* is a necessary part of the process. Children have to trust and like one another in order to reveal their home situations and feelings; in that context, such revelations constitute a bond which greatly increases the chances of continuing friendship and support.

All of this implies that *group work is the mode with greatest benefit*. Individual help may form an important adjunct for many children, or a temporary substitute for those who cannot endure a group. But only group work breaks down isolation and the sense of shame, and increases the child's chances of hearing something useful.

It should go without saying that *there is no substitute for direct, real-person contact and the opportunity to unburden*. There is a tendency to look to the mass media to inform children quickly and cheaply about family alcoholism. It is our belief that only an insignificant number of children will ever seek treatment as a result of such exposure. In fact, they probably don't attend to those media messages until someone they know and trust has brought the subject of family alcoholism to their attention. Mass education can make personal and programmatic intervention more possible by opening the subject of family alcoholism to public discussion. But it cannot do more than complement programs designed to identify and intervene with children of alcoholics.

The optimal intervention program is aware of its limits. Its goal is to equip the child to receive lasting help, whether from formal resources or from friends now seen to be worthy of trust. *The program builds strong transitions from the help it has rendered to ongoing support and more intensive and specialized help for both the child and the entire family*. It helps children discuss what they are learning with family members, when appropriate, and uses a variety of techniques to maximize familial support and increase the incidence of parental treatment. It has close relationships with mental health and alcoholism treatment facilities, and participates in mutual consultation and referral. Above all, perhaps, it strives to involve youth in Alateen and Al-Anon. As free, lifelong, and readily available resources, they remain the surest route to lasting improvement.

Cost-effectiveness is of course an important criterion of success. While accountability is desirable, there are dangers in using numbers to assess results. To know what is cost effective, we first need to know what is effective, and this underlines the need for *unobstrusive evaluation* of innovative models and strategies.

Finally, to sustain work with children of alcoholics beyond the duration of a pilot project *a sound base of community support is essential*. A systematic program for children of alcoholics cannot seclude itself in a hospital setting. It needs the active collaboration of many elements in the community: schools, human service agencies, the self-help network, and the general public. In order to organize these forces, and to deal with resistance which often arises in the face of work so controversial, a group of committed, respected, and informed citizens and civic leaders must identify themselves with the program and its goals.

Public presentations and forums, which both entertain and educate, create a community atmosphere which promotes openness about family alcoholism, while also making the helping resources more widely known. In this regard, live dramatic presentations are probably more effective than films, because people come to see their friends and children perform.

Some Promising Current Models and Strategies

Only a handful of programs in the country appear to be working with children of alcoholics in any sizable numbers and duration of time. In this section, the most noteworthy aspects of the methods and rationale some use in the various stages of the intervention process are described. Representatives of the seven programs included in this section were invited by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) to participate in its September 1979 Symposium on Services to Children of Alcoholics.

It may be helpful, by way of an overview, to categorize the programs along three dimensions: locus in the community; age range of children served; and parental involvement in treatment.

1. *Locus*. Five of the programs are integrated within an alcoholism treatment or mental health service for either parents or adolescents with identified problems related to alcohol abuse. These are: the County of Nassau, N.Y., Department of Drug and Alcohol Addiction; the Department of Community Mental Health of Westchester County, N.Y.; New Directions, the Family Center Youth Program in Santa Barbara, Calif.; Rainbow Retreat in Phoenix, Ariz.; and the Kolmac Clinic in Silver Spring, Md.

One program, at The Door in New York City, is part of a comprehensive multiservice center for adolescents which works with a large multicultural population of youth with and without presenting problems. The remaining program, the CASPAR (Cambridge and Somerville Program for Alcoholism Rehabilitation) Alcohol Education Program of Somerville, Mass., is integrated within a school- and community-based education/primary prevention program specifically concerned with alcohol, drinking, and alcoholism. Administratively, CASPAR is an

integral part of the area's comprehensive mental health and alcoholism delivery system; but physically and practically, it stands apart from both the schools and the treatment components, and is not identified in the community with alcoholism treatment or mental health care.

2. *Age Range.* The programs at New Directions and The Door are exclusively for adolescents; the same is true of the school-based component of the Westchester County project. The Nassau County program begins at age 9, but reports difficulty in engaging adolescents (Kern 1979). The CASPAR and Kolmac programs work with youngsters beginning at age 6, and the Rainbow Retreat accepts infants accompanied by their mothers. In these last four programs, the upper age limit is 18 or higher.
3. *Parental Involvement.* Parental involvement in treatment is either a requirement or a practical necessity in order to reach the Westchester clinic-based program. New Directions, working predominantly with youngsters who themselves abuse alcohol, reports that 90 percent of their parents participate in family therapy (Muller 1979). At CASPAR, The Door, and the Westchester County school-based program, there is much less formal parental involvement; the majority of youngsters served come from families in which neither parent is acknowledging the alcoholism or asking for help for themselves or their children.

In surveying these seven programs for what they have in common, five characteristics stand out.

1. *They emphasize group work*, enhanced by varying degrees of family and individual counseling. In general, groups are organized to minimize the age range of participants, and most are composed entirely of children from alcoholic homes. The groups are predominantly educational/supportive rather than psychotherapeutic, but this is not to say that they are primarily didactic and concerned with the imparting of information. Rather, they encourage children to express their deepest emotions about themselves and their families.
2. In all of the programs, *the duration of the formal intervention is relatively brief*. The basic intervention process takes not more than 1 year and sometimes as little as several months. Of course, all of the programs supply or arrange for ancillary or continuing services. The brevity of involvement may reflect a number of practical factors, such as the resistance of youngsters and the demands on limited staff. But these programs seem to subscribe to a shared view of their intervention mission, articulated by Dr. Janet Woititz, a private practitioner and author (1979a, b). The view maintains that most children of alcoholics can be helped easily and dramatically in a relatively short period of time. Before they receive help, they simply know of no other way to comprehend and react to their family's alcoholism. When they do learn a healthier and emotionally more satisfying perspective, many have the experience and strength to change their coping

styles, and a new readiness to seek and accept future help. It is this perception of many of the children's needs which has led to intervention approaches which are mainly educational and brief.

3. *There is clear agreement on the need to train professionals about the problems and needs of children of alcoholics.* Clinic-based programs in particular stress the dangers to the children's component presented by alcoholism counselors, psychiatrists, and nurses who, for one reason or another, fail to subscribe to the goals and methods being used. Education for caregivers, like the education for the children, has both cognitive and affective dimensions. They, too, have emotions and biases about family alcoholism which may subvert their positive contribution. Staff members who are recovered alcoholics may have an exceptionally difficult time with programing for children. In addition, adolescents can be trying in their testing of limits, and staff members who relate primarily to adults may need help and ongoing consultation in order to empathize with their younger clients.
4. *All of the programs report increasing demand for services, which is a benchmark of success.* Increased volume is attributable to several phenomena: the resource becomes more widely known in the community; those who have been helped refer friends; agencies pleased with prior referrals increase their referrals dramatically, because they are both more sensitive to the need and more confident of the help they can offer; and the intervention programs themselves evolve more effective ways of reaching youngsters. Another phenomenon contributing to the community-based programs is a gradual change in mores concerning the open discussion of alcoholism; it is simply more commonplace and acceptable to talk about the drinking of friends or parents. Increasing caseloads have implications for the funding and staff structure of intervention programs. The Kolmac Clinic, for example, uses careful data collection to estimate with accuracy the projected population of children to be served and the corresponding staff requirements (Richards 1979a). The CASPAR program, with its various levels of peer-led intervention, seems to be optimally designed for responsive expansion.
5. *Despite difficulties in measuring outcomes scientifically, and differences in criteria, these programs all see substantial progress in their children,* justifying continuation and expansion of their projects. Clinical observation accounts for a good deal of the measure of success, but impressive objective results have been reported as well. For instance, the Nassau County program declares that for about 50 percent of its mostly preadolescent caseload, the children's involvement has helped to motivate the alcoholic parent to seek help. New Directions cites a dramatic decrease in short-term recidivism among 50 youthful offenders with alcohol and family alcoholism problems. CASPAR reports

improvements in school attendance and behavior, and better social integration on the part of many of the children it has served; and the same is true of the two pilot school-based efforts conducted in Westchester County (DiCicco 1979; Morehouse 1979). The latter project adds another significant outcome: All of the participating teenagers told their nonalcoholic parents about their involvement in the intervention group, and half also told their alcoholic parents. For the most part these programs lack the resources to attempt more methodical evaluation, especially given the complex problems which attend it. The Westchester County program, however, has received ample funding from the State of New York to evaluate in depth six pilot projects begun in 1979.

The Intervention Process

Pre-identification Strategies

These are the steps which can be taken to increase the incidence of identification and referral or self-referral. In most programs, training appropriate caregivers is the key. These include personnel in alcoholism or mental health treatment agencies or generic youth centers; others are involved in corrections or school guidance capacities. Programs which work with the children of patients are concerned with training caregivers more for support than for identification. Those which train potential referrers usually concentrate on professionals who deal with demonstrated problems with school or with the law. They seek to raise awareness of family alcoholism as the treatable source of such problems.

The CASPAR program gives the preidentification stage an additional, critical dimension. Most of its training is directed at teachers of all grade levels. Teachers utilize the CASPAR (1978) curriculum *Decisions About Drinking* to teach alcohol education units of 7 to 10 sessions. The last 2 or 3 sessions are devoted to family alcoholism. A longer alcohol education workshop is offered by trained peer leaders during or after school. Apart from the primary prevention goals addressed in these endeavors, the CASPAR approach has had dramatic effects on children of alcoholics.

First, the professional or peer teacher can identify children who are not exhibiting problems. By introducing alcohol education as a subject, the teacher interacts with 25 children and enables them to talk with one another, without singling anyone out. A counselor responds to a perceived problem, but a teacher initiates openings for those who have been unable to ask for help either verbally or through their actions. In particular, the superachievers and the withdrawn children have an opportunity to respond to the teacher or to classmates, whereas they might never create an opening for themselves.

Second, the teacher does not have to identify children in order to help them. We have emphasized that the intervention process is primarily educational, and it is gradual and incremental. Children come to acknowledge and reveal their secret over time, depending upon the depth of their pain and desperation. There will be some youngsters who do not identify themselves to the teacher in overt or covert ways, or who refuse to be coaxed into getting more help. But the teacher can still be assured that significant help was rendered. Simply by raising the subject of family alcoholism in full view of the classroom, and not cloistered in a cubbyhole; by exposing children to what their classmates have learned and can say about alcoholism; and by communicating the key concepts about family alcoholism listed under the goals of intervention, the teacher moves children closer to the point at which they can articulate their problem.

Much more needs to be said about the issues involved in training youth professionals. For present purposes, these brief points are presented.

1. It can never be assumed that little or no training is needed because of prior professional training or experience. Very few professionals receive even elementary information about family alcoholism; and information does little to counteract the powerful personal, cultural, and professional biases which, more than a lack of knowledge, inhibit pursuing an active role with children of alcoholics. The greater part of training should be geared to changing attitudes and building commitment, not supplying information.
2. Effective training cannot be telescoped into 3 or 4 hours. We believe that inadequate training is worse than none at all, because it creates the illusion of preparedness. Trainers are advised to decline training opportunities of fewer than 8 hours. For the training of teachers, CASPAR has found 20 hours to be a realistic minimum.
3. All kinds of inducements are fair to use in getting human service personnel to submit to training. Incentives are invaluable, but coercion is sometimes necessary, too. Once individuals attend, ingenious methods can win them over; but they cannot be trained unless they are present (Deutsch 1980; DiCicco and Unterberger 1977).

Identification Strategies

For the programs which confine intervention to the children of alcoholic patients or their spouses, identification strategies are directed to the patients rather than the children. The number of children identified is thus a function of the effectiveness of patient outreach; and the proportion of those children who become involved depends on intake procedures and intervention techniques.

Most or all of the seven programs receive referrals of children identified by police, courts, and school guidance personnel. In addition, most of the programs maintain excellent relations with AA and Al-Anon groups, and children in need of services are made known to them by members. At The Door, much of the identification of children of alcoholics is accomplished through intake procedures when a youth comes to use the facility for the first time; and the staffs of the tutorial, vocational, medical, and creative arts components are trained to recognize symptoms that might indicate family alcoholism (Landes 1979).

CASPAR's principal means of identifying children of alcoholics are unique among the seven projects. Roughly one-third of the 150 children of alcoholics who received intensive CASPAR intervention in a 2-year period were initially identified and referred by classroom teachers, usually during the course of an alcohol education unit; and another third were identified by trained peer leaders. The remainder were identified through the mechanisms common to the other programs.

A number of the activities in the CASPAR curriculum have been exceptionally successful in stimulating children to ask for help directly. More often, students cannot go that far; they need the teacher to share with them the responsibility for the disclosure they regard as betrayal. CASPAR prepares teachers for the covert behaviors which, particularly during a unit on alcohol, often indicate a sensitivity to the subject (Biron et al. 1980). Some are: the passivity of an ordinarily active student, or the activity of an ordinarily passive one; other marked changes in the student's ability to attend or concentrate; the equation of drinking with drunkenness, or, in the early grades, a strong negative attitude about alcohol and drinking; and lingering after class has ended, on one pretext or another.

Peer leaders look for the same kinds of behaviors in the basic alcohol education groups they conduct. In addition, they identify children through one-shot alcohol education presentations, which often include the opportunity to sign up for an additional CASPAR workshop. Two of the most successful settings for this kind of identification have been youth employment programs and summer day camps.

The other advantage of the peer leader approach is that they are still adolescents within the teenage subculture. They constitute an informal network in and out of school; they are widely known to their friends and classmates; and they are often easier to approach than an adult. In addition, because parental approval or participation is not required, youngsters who have come for help, or who want to come, can bring their friends; and many children of alcoholics seem to have friends who are in the same circumstances.

Referral, Intake, and Assessment Strategies

Most of the programs under discussion apply the maxim, "Keep It Simple," to their intake and referral procedures. They seek to make the

admission process relatively uncomplicated. Assessment is generally less a part of the intake process than of the intervention process itself. Most programs assume that a group format is desirable for most youngsters, and additional or more intensive needs are diagnosed in the course of the group experience or through individual counseling once the group process has begun. Age is the principal criterion in the formation of the groups; the kind of careful attention to composition which characterizes psychotherapeutic groups does not appear to be necessary in educational/support groups.

The program at The Door requires more complicated intake and assessment strategies, because only a handful of the more than 2,000 teenagers who use the facility each month have been previously identified as children of alcoholics. Every new client is given a uniform initial interview regardless of the specific service he or she is requesting; and the information obtained is reviewed by an alcohol treatment team. Of 300 teenagers whose intake information was screened by the team in a 6-month period, about one-fifth were deemed appropriate for the adolescent alcohol abuse treatment program because of their own or their parents' drinking.

Programs have learned to be aggressive in soliciting referrals. They engage in community education and establish strong liaisons with court and school personnel, because they know that more referrals are made to known individuals than to amorphous programs with faceless staffs. Some programs set up regularly scheduled case conferences, which promote referrals and also contribute to ongoing training. The consultant who comes to the probation office on a regular monthly basis may occasionally sit alone; but in the long run he or she gets more referrals than the person who simply waits for telephone contacts to be made. CASPAR senior peer leaders, for example, have regularly scheduled hours at the junior and senior high schools. By their accessibility and persistent sensitization of the guidance counselors, they have developed a sizable caseload and a great deal of mutual respect.

To reach adolescent children of untreated parents, intake and referral procedures must be designed to safeguard both the teenager and the referring staff person. CASPAR facilitates these processes by making its intervention program both outwardly innocuous and plainly seductive. CASPAR is known primarily as an alcohol education program, preparing youngsters for the decisions they face about their own drinking. Its peer leaders are respected and even envied. Because peer leaders run basic workshops in alcohol education, open to all children, at the CASPAR office, and because participation in these workshops is seen as a pathway to eventual peer leadership, attending weekly meetings at CASPAR does not indicate a parent's or child's problem with alcohol. Thus, groups exclusively for children of alcoholics can be offered without spotlighting participants.

In addition, participants in CASPAR workshops are paid upon completion for the total hours they attend. This stratagem has many advantages. It helps to overcome initial resistance; it promotes better

attendance and more serious participation; but most important, it supplies children with a legitimate justification their parents and casual friends cannot question: "It's a job—I get paid for it." The referring person who can describe the intended resource in these terms is certainly more apt to interest the young person.

There are other important incentives as well: trips, general good times, and the making of good friends, in addition to the obvious benefits of the content. Course credit might be substituted for pay, but the risk is that it would appeal only to the more conscientious students. It is worth noting that many adults reflexively disapprove of paying children to receive help. It must not be forgotten that these children are doing hard work; they are not only tackling their own problems, but are simultaneously helping the other children in the group, and are equipping themselves to help children they may meet later.

Intake procedures for preadolescents without parents in treatment address the necessity of securing parental permission. CASPAR seems to be the only program involved with this population. Parental permission for participation in time-limited, in-school groups for children in grades 1-3 and 4-6, run by one teacher and one CASPAR adult staff member, was secured by a letter which explained the nature of the group and made clear the option to refuse permission. Because the letters emphasized alcohol education and the children's emerging attitudes about drinking, rather than parental alcoholism, and because of the respect or fear with which many parents regard schools, even children with two alcoholic parents were granted permission to attend the groups. In fact, there was a long waiting list.

The Kolmac program has taken two steps which increase the incidence of children's involvement. For those alcoholic patients with children within the age range served, the parent's admission to the program is virtually conditional upon the attendance of the children, and this is specified at intake. Furthermore, the cost of the services to children is incorporated within the charge to patients, so that all patients underwrite those services, and those with children are simply asked to accept what they have already paid for. It is unclear, however, for both Kolmac and the other clinic-based programs, to what extent the children of parents who are separated from the home are involved.

Intervention Strategies

In general, the small group of peers is the centerpiece of the intervention process. The Nassau County group is admittedly too large at 18 members; most groups average 6 to 15 participants. These groups differ from program to program in a variety of respects.

1. *Composition.* In most programs the intervention group is composed entirely of children with parental alcoholism. However, The Door seems to form its groups according to the individual's alcohol abuse or nonabuse rather than the family pattern; thus, there are groups for young abusers, many of whom come from

alcoholic homes, and other groups for those children of alcoholics who are not exhibiting problem-drinking behavior. Westchester County's 1977-78 groups were exclusively for children with parental alcoholism; subsequently they added groups for young alcohol abusers, some of whom came from families with alcoholism. The CASPAR program, in addition to its peer-led groups exclusively for children of alcoholics, has conducted groups at a local court in which all members are youthful problem drinkers, and 80 percent come from alcoholic homes. In addition, some of the elementary school groups are comprised of children with and without family alcoholism. It should be added that CASPAR's open alcohol education groups, which are extremely heterogeneous, often fulfill intervention as well as identification functions.

2. *Format and Style.* Most of the programs favor closed, time-limited groups. Open-ended or open-enrollment groups, available as needed upon completion of the initial phase, are offered by the Nassau County Program. Westchester County participants can join a new closed group composed of former members and newcomers. CASPAR provides transitions to other time-limited groups with different focal points, and, ultimately, to peer leader training for some. Some groups meet once a week for 2 hours; The Door's groups meet twice weekly and most Kolmac groups meet for 1 hour. Most of the Westchester groups meet for a total of 10 45-minute sessions, held once or twice a week. The time is rotated so members don't miss any class more than twice.

Many programs use a contracting system, with children or with parents, with the minimum contract ranging from 4 to about 10 weeks. At CASPAR, as has been noted, the contract involves money: children are paid at the rate of \$1.75 per hour for the time they attend.

In most of the programs, groups are held in the evening, concurrent with group or individual sessions for adults, on whom the children rely for transportation and permission. In contrast, CASPAR groups are usually held from 3 to 5 p.m. Youngsters come directly from school, taking advantage of public transportation and the compactness of the community to protect their privacy. Exceptions are the in-school groups for young children, and occasional evening groups for older teens.

All of the groups provide some structure for the discussion of family alcoholism, but the degree varies considerably. The Nassau County group for younger children is described as a "rap" group; the children initiate the topics and the leaders help make the connection with the relevant aspects of the family alcoholism experience. Rainbow Retreat, the Kolmac Clinic, and CASPAR begin with concrete educational objectives and planned activities. Group leaders are more directive, but they always allow for participant initiation.

The CASPAR groups are structured to include some meetings at external sites. One session typically takes place over pizza or ice cream, just before or after the group attends an Alateen meeting.

Another session may be held at a detoxification center or halfway house. The final group session is often more recreational than educational, or it may be an all-day meeting combining play and learning. Rainbow Retreat also strongly reflects the emphasis on building social relationships and a positive feeling about the whole group experience (Rhoads 1979).

3. *Leadership.* Some groups have one consistent leader, but more often there are two. In every program except CASPAR, the leaders are specially trained professionals with backgrounds in psychology, social work, or education. CASPAR's school-based groups for young children, and court-based groups for youthful problem drinkers, are led by two adults: one CASPAR staff member and one trained teacher or probation officer. But most CASPAR groups are conducted by two trained peer leaders who are themselves children of alcoholics. These peer leaders undergo rigorous training in family alcoholism and group dynamics following their regular peer leader training. They lead groups only after they have participated in one and been an observer in another, and only when they have satisfied training requirements and shown that they are dealing constructively with their own family alcoholism. Peer leaders spend an average of 3 hours per week planning and evaluating each session with staff, and additional time comparing notes with other peer leaders. CASPAR plans to test still another leadership mode: one adult and one peer leader.

All of the seven programs offer individual therapy, in conjunction with or sometimes instead of group therapy, as needed. The goals of such therapy, as well as the criteria determining its duration, vary between programs and within programs on a case basis. In a number of programs, the time-limited educational group leads children into short-term individual counseling which, in turn, and coupled with the adult patient's progress, enhances the likelihood of conjoint family therapy.

Family therapy, based on the systems approach described earlier, is a feature of most of the programs, though it is unclear what percentage of the children become involved, at what ages, and for how long. At New Directions, family therapy is the central modality. Every effort is made to involve the parents and siblings of the youthful problem drinkers who comprise the principal population served. The program reports a very high rate of parental participation, but also cites difficulty in involving parents with active alcoholism problems.

Reinforcement and Followup Strategies

The Door and Rainbow Retreat are the most comprehensive of the programs, providing an array of services and activities from the moment of intake, and even prior to identification of the family alcoholism problem. Vocational, tutorial, medical, and recreational needs are assessed and met by the programs, whereas the other projects rely on

outside resources. Many of the programs cite the need for residential resources, but except for Rainbow Retreat, they rely on other agencies or an informal community network for short-term removal from a dangerous home situation.

The CASPAR program recognizes that children respond at different rates, and each child's responsiveness to intervention may depend on the relative chaos or security of the moment. Thus, the same school- and community-based strategies described under *preidentification* function as reinforcement as well. A 7th grader may be involved in a group for children of alcoholics, taking some things from it and resisting or rejecting others. He or she will learn about drinking and family alcoholism again in the 8th, 9th, and 10th grades, and each time he or she may be able to accept notions which were impossible to take in earlier. The child changes, the home situation changes, the intervention agent changes; and the program which can reach children at several points over time has the capacity to take advantage of the differences in readiness which these changes create.

Future Needs

The development of programs to serve children of alcoholics depends upon joint Federal and local leadership. The Symposium on Services to Children of Alcoholics, convened by the NIAAA in September 1979, may prove to have been the first important step. The children need active advocates who can demand and get funds in the face of constricted budgets and stiff competition. National policymakers need such demands, coupled with sound and innovative proposals, if they are to allocate money for services to this population.

Symposium participants articulated more than two dozen concrete recommendations, which included the following.

1. Resolving ambiguities in the terms "prevention" and "treatment," inasmuch as these ambiguities have inhibited coherent policy guidelines in serving children of alcoholics.
2. Reordering NIAAA priorities, and influencing the priorities of other national organizations and funding sources, to reflect a greater commitment to this population.
3. Promoting cooperative financial, policymaking, and research arrangements with the human service delivery systems concerned with mental health, drug abuse, child welfare, youth employment, and education.
4. Encouraging professional schools in medicine, nursing, education, social work, psychology, theology, and other fields to incorporate training in family alcoholism, and requiring such training in continuing education programs.
5. Developing mechanisms whereby intervention with children of alcoholics will be reimbursable and therefore locally supportable.

6. Providing long-term funding for innovative programs and careful research, and money to replicate those programs; in effect, rejecting the concept of the 2- or 3-year demonstration model in this field.
7. Collaborating with State alcoholism authorities to provide special training for those who will work with children of alcoholics.
8. Raising public awareness of the incidence and severity of family alcoholism, and the various ways in which concerned citizens can help; and making the disease more known to those who suffer from it, and less taboo.
9. Helping to clarify the legal and ethical issues in reaching and helping this group of children.
10. Requiring services for children of patients to be integrated within alcoholism treatment programs; and aggressively promoting promising techniques for involving children with untreated parents.

Children of alcoholics constitute a large population at great risk of developing a multitude of debilitating, and socially costly, problems. In neglecting them we have also undermined our efforts to make a more healthy society. There is no justification for neglecting them any longer.

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Chapter 6

Employee Alcoholism Programs in Major Corporations in 1979: Scope, Change, and Receptivity

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Abstract

Surveys of samples of Fortune 500 corporations since 1972 indicate substantial growth in the extent of employee alcoholism programs, with 56.7 percent reporting such programs in mid-1979. The rate of growth in numbers of programs slowed between 1976 and 1979 as compared with earlier periods, but the 1979 data indicate considerable strengthening in terms of presence of key program components. Corporate social responsibility is the leading internal reason for program adoption, and existing programs show high degrees of support from management as well as from labor in unionized settings. Executive respondents are also personally knowledgeable, supportive, and inclined to utilize their company's program if necessary. Unions are directly involved in program implementation in about half of the unionized organizations with programs. Medical department involvement in program administration is indicated in a majority of programs, while sole responsibility vested in the personnel functions occurs in only a third of the reported programs. Respondents generally reported low estimates of the prevalence of alcohol problems in their companies, considerably lower than those advanced by alcoholism specialists. Respondents also tended to project low prevalence rates across different organizational levels, although those in companies with programs made significantly higher estimates than those in nonprogram companies. Both types of respondents perceived the highest proportion of alcohol problems among lower echelon employees. Corporate social responsibility was significantly associated both with the presence of a program and with receptivity toward program adoption. Respondents in companies without programs indicated experience in dealing with problem-drinking subordinates with modestly successful outcomes. Respondents who were otherwise not receptive to program adoption indicated substantial dissatisfaction with current procedures for dealing with problem drinkers, pointing toward the importance of building upon existing company practices in attempting program initiation.

Introduction

Use of the workplace for the identification and referral of employees with drinking problems is a major programmatic development of the past decade. Since 1971, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) has both directly, through project grants and contracts, and indirectly, through State formula grants, supported field efforts to promote the adoption of occupational alcoholism programs in a wide range of work settings. This funding has stimulated numerous agencies to provide consultation services, resulting in a wide dispersion of program activity (Roman 1980). Consequently, it is a challenge to measure the nationwide scope of program development because program monitoring exists only for those projects directly funded by NIAAA.

In order to measure progress in occupational program development in one segment of American work organizations, NIAAA commissioned surveys of the leading private sector corporations in 1972, 1974, 1976, and 1979. Data have been collected through the Opinion Research Corporation's "Executive Caravan" surveys, using the universe of the "Fortune 500" manufacturing corporations and the 250 leading banking, insurance, utility, transportation, and financial organizations. In the four studies, respective samples of 528, 503, 536, and 499 top and middle management executives were drawn for personal interviews. The data are not specifically longitudinal in that each sample was independent of the others. The sampling strategy provided for representation of both the universe of companies and the universe of principal executives in those companies. Data are thus limited to these large private sector companies, and findings cannot be generalized to program development in the public sector or in smaller private sector organizations.

This report has three sections. The first section is a description of program development as of 1979; where possible, it includes comparisons with previous survey results. The second section is a comparison of companies and executives that do and do not report the presence of a program. The third section focuses on those companies currently without programs, comparing companies and respondents who do and do not report receptivity to adopting a program.

Two features of these data are significant in interpreting the results. First, because data were collected by research interviewers who had no association with occupational alcoholism programming; their identify would not have stimulated the image of alcoholism program development as socially desirable, thus minimizing the problem of overreporting. Second, the crucial definition of program presence and the description of program attributes are based on executives' perceptions. Independent of their accuracy, these perceptions are of consequence to the extent that they guide the behavior of key decisionmakers (Berger and Luckmann 1966).

The 1979 survey sample included 74.5 percent industrial organizations, followed by 8 percent each of insurance and banking organizations, with the remainder of the sample distributed across utility, transportation, and diversified financial organizations. There was a wide range in size: 19.6 percent of the organizations had fewer than 2,500 employees and 16.4 percent had more than 50,000 employees, with a fairly even distribution between these two extremes. In terms of respondents' positions, most were at the upper executive levels, with 55.2 percent at the level of assistant corporate officer or above. Lower levels represented included general and departmental managers, directors, and administrators. Twenty-six percent of the sample reported salaries over \$75,000, with 30 percent between \$50,000 and \$75,000, and only 9 percent below \$30,000.

Descriptive and Comparative Profile of 1979 Survey Data

Program Presence

Of primary interest is the proportion of these major private sector organizations reporting the presence of "a program to identify and provide assistance to employees with drinking problems." As indicated in table 1, the proportion reporting such programs has increased steadily since the first survey in 1972. In fact, this proportion doubled between the 1972 and 1976 surveys.

Table 1. Percentages of Sample Organizations Reporting Presence of Program to Identify and Assist Employees With Drinking Problems

Year	Yes	No	Don't Know
1972	25.2	61.8	13.0
1974	34.1	52.8	13.1
1976	50.4	39.4	10.2
1979	56.7	35.7	7.6

The relative increase between 1976 and 1979 is less than would have been expected on the basis of prior trends. Between 1972 and 1974, there was a 9-percentage-point increase, followed by a 16-percentage-point increase between 1974 and 1976. Given the passage of 3 years between the 1976 and 1979 surveys, an increase of 20 percentage points may have been a reasonable expectation. The relatively small increase of 6.3 percentage points is, in fact, even smaller when compared with prior increases because of the decline in

"don't knows"; this smaller growth rate may be a function of four factors.

First, there is impressionistic evidence that, in the recent past, field consultants have concentrated their efforts on medium-sized and smaller organizations, especially with the growth of interest in the "consortium" approach. Thus, new program development in major corporations may be a lower priority, especially if efforts to promote program adoption are proving more fruitful in smaller organizations, where an adoption decision can be reached relatively quickly.

The present data set does not, however, indicate an absence of attention to these large organizations. As subsequently described, the structural content of these programs has improved markedly since the 1976 survey, indicating both internal and external efforts to "upgrade" existing programs. Thus, a second possible explanation for the smaller rate of growth is that field personnel are more concerned with program quality than with program quantity in dealing with these major organizations.

A third factor may be a change in the definition of a "program" on the part of executive respondents. As program quality improves, respondents may utilize more stringent definitions of a "program," with more ingredients being necessary to define a program's presence.

Finally, from a different perspective, these data may mean that new program development is approaching a saturation point in these major organizations. As subsequently described, there are numerous factors leading to resistance to program adoption in organizations currently without programs. It may be that a "hard core" of resistant companies are unlikely to adopt programs, because they find current rationales for the value of such programs less than compelling.

A review of the characteristics of those organizations that had adopted programs before the 1979 survey indicates that program adoption is approximately the same in industrial settings as in the overall sample. Banks appear the most resistant to programs, with only 25 percent indicating adoption, while over 90 percent of the insurance and transportation concerns in the sample reported program presence. Financial houses and utility companies are also above the norm in their rate of program adoption.

On the basis of chi-square tests and the gamma statistic, there is a positive relationship between company size and program adoption. The relationship is only approximate, however. Program adoption is close to the sample norm in organizations with less than 2,500 employees; greatest resistance to program adoption is in those companies employing between 2,501 and 10,000 employees.

The presence of a union is strongly associated with program adoption although the association is not linear in terms of degree of unionization. Although any degree of unionization is strongly associated with program presence, those organizations with either a minority or a vast majority of unionized employees are most likely to adopt programs.

Program Structure and Ingredients

As previously indicated, reports of executive respondents were the basis for establishing the presence or absence of an employee alcoholism program in a given company. Programs are not, however, equivalent to one another; they vary in the degree to which they include the ingredients deemed important for the successful identification, referral, and recovery of problem-drinking employees.

Table 2 reports the extent to which program ingredients were reported present in 1976 and 1979 and indicates the relative change across the two surveys. There is an increase in the extent to which each ingredient is present. The ordering of these ingredients was approximately the same in the two surveys, with assurances of confidentiality and health insurance coverage for inpatient alcoholism treatment nearly universal and with 24-hour hotlines found infrequently. Although a written policy is regarded as an essential foundation for a program, some programs operate without one. The data also indicate that a substantial minority of programs do not utilize means of diffusing program information to management, supervision, or the general employee population.

The overall direction of program development is revealed in the data on the degree of change between 1976 and 1979. The proportion of programs with at least one full-time staff member increased substantially, from a minority of programs in 1976 to a majority of them in 1979. Supervisory training and health insurance coverage for outpatient alcoholism treatment also showed substantial increases. By contrast, increases in the presence of a written policy, written procedures, and hotlines were minor.

Those categories showing significant increases between 1976 and 1979 reflect relatively expensive and substantial input by the organization and involve program ingredients believed to be essential to program functioning; changes that might be viewed as "cosmetic" were less common. In many instances, therefore, programs are considered serious investments, and the efforts of external agents to upgrade programs since the 1976 survey may be reflected in these data.

Although these changes are encouraging, there are still indications that many programs are far from complete, especially in terms of diffusing information about the program to managers, supervisors, and the general work force. Without such diffusion, a program may not, in reality, be operational (Dunkin 1980). Also, only a minority of these programs include internal written publicity to encourage program use; such publicity should constitute a relatively minor investment for the organization.

Table 3 provides comparative information on the reported reasons for initiating a program. There are post facto reports from executives who may or may not have been involved in the adoption decision. No clear pattern is evident from these data, except that corporate social

responsibility remains the single, most prominent reason for program adoption, increasing slightly from 1976 to 1979. Job-related conse-

Table 2. Percentages of Certain Program Ingredients Reported Present in 1976 and in 1979¹

Program Ingredient	1976	1979	Percent Change
1. Assurance of confidentiality to users of program	94.2	96.7	2.5
2. Health insurance coverage for inpatient treatment of drinking problems	84.1	94.0	9.9
3. Written company policy	76.8	80.0	3.2
4. Written procedures for identification and referral	71.7	77.2	5.5
5. Health insurance coverage for outpatient treatment of drinking problems	63.0	77.8	14.8
6. Orientation sessions for management	57.9	68.3	10.4
7. Education of employees about the program	45.3	56.2	10.9
8. Program access for employees' dependents	45.3	54.0	8.7
9. Training or orientation of all supervisory personnel	42.4	59.8	17.4
10. At least one full-time staff member operating the program	38.2	58.5	20.3
11. 24-hour hotline telephone service	17.1	19.6	2.5
12. In-house posters/publicity encouraging program use	—	41.0	—

¹ Except where indicated, all percentages are adjusted, with "don't know" responses excluded.

quences such as poor performance, absenteeism, and turnover remain relatively minor reasons for program adoption. There was a substantial increase in specific evidence of employee alcohol problems as a reason for adoption, perhaps reflecting a greater awareness of alcohol problems by executives (which was found elsewhere in the data set). Finally, these data indicate that internal and external change agents are not the *primary* factor in program *initiation*; this finding does not, of course, negate these roles in program development. From these reports, it may be concluded that factors creating organizational

readiness to adopt a program are usually present prior to program initiation.

Table 3. Reported Principal Reason for Program Initiation (in Percentages)

Principal Reason	1976	1979
Corporate social responsibility	21.3	26.0
Evidence of employee drinking problems	7.1	17.5
Poor performance of employees	11.2	6.4
Recognition of alcoholism as an illness	8.3	5.3
Absenteeism among employees	3.0	3.5
Initiation by internal individual with specific interest	8.9	2.8
Personnel turnover	0.6	0.8
Initiation by external consultant or agency	1.8	0.3
Other	32.0	27.0
Don't know	5.9	10.4

The organizational locations of programs are indicated in table 4. These data indicate a trend away from placing programs in personnel departments toward placing them in a medical setting. The percentage of those programs jointly administered by personnel and medical functionaries remained constant, as did that of independently placed programs. Although the personnel function remains a predominant program location, increased awareness of alcohol problems by medical professionals may result in a growing interest by medical departments in undertaking responsibility for these programs.

Table 4. Organizational Location of Programs for All Organizations (in Percentages)

Location	1976	1979
Personnel/industrial relations	43.7	36.3
Medical/employer health service	15.3	23.0
Combined responsibility of personnel and medical functions	38.8	37.9
Independent of both personnel and medical functions	2.2	2.8

An important structural ingredient for successful program functioning is the involvement and support of labor unions where some portion of the workplace is organized (Beyer et al. 1980; Trice and Roman 1978).

Table 5 provides comparative data on union participation in company programs. About half of the respondents reported joint labor-management administration of the program in 1979, representing a modest increase over 1976. A similar pattern is shown for the more frequent involvement of union shop stewards in the confrontation process.

Table 5. Union Participation in Programs (in Percentages)

Participation	1976	1979
Joint union-management committee involved in operating the program	41.9	50.8
According to company policy, shop stewards participate in confronting a problem drinker	45.0	56.9

Table 6 shows rather dramatic increases in the extent to which unions are reported as strongly supporting the employee alcoholism program, with an accompanying decline in both moderate and indifferent support. This is a significant change from the 1974 and 1976 figures. The table also indicates a sharp decline in the proportion of respondents who indicated "don't know" to this question in 1976, a fact that may have masked the actual degree of union support at that time. When these data were collected in 1976, national debate on the role of unions in these programs was under way. The ambiguity of this debate may have affected the executives' perceptions of union support. The 1979 data confirm the integration of union involvement and support into program functioning.

Table 6. Strength of Union Support for Programs (in Percentages)

Type of Support	1974	1976	1979
Strong support of program by union	39.4 ¹	40.0	70.0
Moderate support by union	43.4	46.2	25.7
Union appears indifferent	17.2	13.8	4.3
Union actively opposes program	0.0	0.0	0.0
Don't know union's position	26.6 ²	42.1	23.9

¹ Adjusted percentage excluding "don't know."

² Percentage of total responses.

This encouraging information supports the contention that the perceived conflict between labor and management over employee alcoholism programs which marked the mid-1970s has all but passed. As unions become more involved in the program development process, and in program administration, their cooperation in reaching program

goals does not appear to be a problem for the individual company. It must of course be recognized that these data reflect only the perceptions of management as to the nature of the labor-management relationship.

The 1979 survey included several new items that relate to program functioning. Respondents were asked what routes of employee referral were emphasized in the program. The most frequent response was supervisory referral (41.3 percent), followed by self-referral (31.4 percent), with 27.4 percent of the respondents indicating that supervisory and self-referral were emphasized equally. These data indicate considerable influence by the self-referral model (Wrich 1974), especially given the fact that early program designs were almost exclusively oriented toward supervisory identification (Trice 1959).

To ascertain whether programs have a differential impact across organizational levels, respondents were asked what level of employee is most prevalent among those referred to the program for assistance. Although the largest proportion reported that they did not know, adjusted percentages indicate that perceived referral concentrations are about equal among rank-and-file, middle management, and staff employees. Referral concentrations were less often perceived to exist at the clerical and top management levels. Although the latter finding is in line with expectations, most of the respondents did not perceive higher rates of referrals as occurring in the lower echelons, e.g., the rank-and-file level (Trice and Beyer 1977).

Executive respondents reported considerable contact with the program diffusion process in those companies with programs. The vast majority reported that they had read the written policy (86.1 percent) and the written procedures (83.6 percent). Although 25 percent of the respondents had not attended management orientation for the program in companies where it was available, 96 percent indicated that they knew the steps in initiating a referral of a subordinate.

Program-Related Perceptions

The Executive Caravan surveys have repeatedly included questions that indicate the degree to which the respondents' perceptions are consistent with company program development and with national trends. Table 7 reports the respondents' perceptions of alcohol abuse problems in their own companies and in the Nation. It is immediately evident that problems in the company are perceived as being of a much lower magnitude than those in the Nation; that is, the problem is largely seen as "elsewhere."

In 1979, a relatively small proportion of the respondents perceived a moderate or very serious problem in their own companies, and half of the respondents reported that alcohol abuse was not really a problem. Comparisons over time show that the 1979 and 1972 distributions of

responses are very similar, with higher problem estimates in 1974 and 1976. The decline from 1976 to 1979 may directly reflect the

Table 7. Local and National Perceptions of Alcohol Problems by All Respondents (in Percentages)

Perception	1972	1974	1976	1979
Alcohol abuse in company				
Very serious problem	1.1	1.3	4.0	1.8
Moderately serious problem	10.2	16.7	13.3	11.4
A problem, not too serious	41.7	46.2	35.9	36.7
Not really a problem	47.0	35.8	46.9	50.1
Alcohol abuse in Nation				
Very serious problem	—	26.8	39.3	30.7
Moderately serious problem	—	54.2	45.7	52.8
A problem, not too serious	—	17.6	14.1	15.3
Not really a problem	—	1.4	0.9	1.2

consequences of the proportionate increase in the number of programs and the maturation of many of the programs. (It is hoped that programs do significantly reduce the presence of problems in company work forces.)

The data on the perception of national alcohol problems reflects an erratic pattern for those perceiving a very serious problem. The proportion tending to minimize the national alcohol problem remained stable over the three surveys, indicating stability in the *combined* proportions of those who perceived very serious and moderately serious national problems.

The 1976 and 1979 surveys also provided information on the perceptions of alcohol problems within each organizational stratum. Response categories included "very serious, moderately serious, not too serious, and not really a problem." To an extent, these data amplify those dealing with estimates of the overall company problem.

With the exception of the lowest stratum of blue-collar employees, the estimates of very serious and moderately serious problems remained stable from 1976 to 1979. For the bottom stratum, a modest increase, from 30.2 to 37.2 percent, in those perceiving some degree of problem is indicated. There was an increase in the proportion indicating "a problem, not too serious" for each stratum. The net result was a decline in the proportion indicating "not really a problem" for each stratum. These data indicate a possibly greater awareness of the existence of alcohol problems, but the awareness may be tempered by knowledge that, in many instances, mechanisms are available to deal with the problem. However, for all organizational levels in 1976 and

1979, the vast majority of respondents perceived that alcohol abuse was not really a problem.

Across organizational strata in both 1976 and 1979, the highest proportion of problem estimates was found for the lowest strata, thus confirming other research (Cahalan 1970; Manley et al 1979; Mannello and Seaman 1979; Trice and Beyer 1977). At the same time, the least problems were perceived for the highest strata, the location of most of the respondents. The 1979 data, compared with the 1976 data, show not only an increase in perceived problems in the blue-collar stratum but also an increase in the *differences* between the estimates for this stratum and the others. Again, however, it is important to note that the majority of the respondents perceived alcohol abuse among blue-collar employees in their companies as "not really a problem." The importance of these data lies in their contrast to the common assertion that alcohol problems occur at equal rates across all levels of society and organizations. This assertion is commonly used by employee alcoholism specialists.

Table 8 provides longitudinal information on the degree to which executives perceived management support for their company's program. Top management support is considered crucial for program implementation (Beyer and Trice 1978). The data show a significant increase in strong management support from 1976 to 1979, continuing a trend found across the surveys. At the same time, the proportion reporting that management does not really support the program has practically disappeared. This provides strong confirmation for the contention that programs have been steadily "upgraded" since 1972, and the present data permit strong optimism about the effectiveness of current programs.

Table 8 also includes data on attitudes and perceptions about program effectiveness. Among respondents in companies with programs, the vast majority indicated that their company saves money by having a program; this proportion has shown modest increases since 1974. Among respondents in companies without programs, there was a rather sharp shift in the extent to which programs were *projected* to be cost-effective. The proportion of those in nonprogram companies who believe in the cost-effectiveness of programs for their own companies shrank from one-third to one-fifth of the total. Finally, executives in companies with programs offered positive evaluations of the program's effectiveness. There was a modest increase from 1976 to 1979; nearly all of the respondents indicated that their programs were successful in achieving their stated goals.

Program-Related Experiences

Previous research has indicated the importance of direct experience with alcohol problems in generating both readiness to adopt employee alcoholism programs and support for such programs' operation (Riley

and Horn 1973; Roman 1977). As indicated in table 9, data related to such experiences have been collected since 1974.

Table 8. Management Support, Cost Saving and Perceived Effectiveness of Company Programs (in Percentages)

Response	1972	1974	1976	1979
Management Support				
Strong support	53.1 ¹	65.2	69.1	86.5
Support, but not strong	36.7	33.6	27.7	13.1
Not really supported	10.2	1.2	3.1	0.4
Cost Savings and Perceived Effectiveness of Program				
Company saves money by having program:				
Yes	—	78.4	84.1	6.2
No	—	21.6	15.9	3.8
Company <u>would</u> save money by having program:				
Yes	—	—	33.5	22.3
No	—	—	66.5	77.7
Program is successful in achieving stated goals:				
Yes	—	—	84.8	91.9
No	—	—	15.2	8.1

¹ Adjusted percentages excluding "don't know."

The extent to which executive respondents reported knowledge of drinking problems among company employees with whom they had regular contact remained stable over the three surveys, with a slight trend toward an increase in such knowledge. Those reporting such knowledge are a minority of the total respondents.

Respondents' experiences with drinking problems in their primary groups were more frequent than similar experiences at work, with nearly three-fourths of the 1979 respondents reporting that they had had close friends or relatives with drinking problems. Although this proportion increased significantly from 1974 to 1976, it remained stable between 1976 and 1979.

As would follow from experience with problem drinkers, the proportion of respondents who reported experiences with friends or relatives who had successfully recovered from a drinking problem also remained stable, at about 60 percent, between 1976 and 1979, after increasing from a minority to a majority between 1974 and 1976. Thus, as with the

degree of program development, it may be that reported contact with problem drinkers is reaching a saturation point in these respondent

Table 9. Direct Experience With Problem Drinkers by All Respondents (in Percentages)

Type of Direct Experience	1974	1976	1979
Know company employee(s) with drinking problem:			
Yes	39.6	40.4	42.2
No	60.4	59.6	57.8
Have close friend or relative with drinking problem:			
Yes	59.2	73.3	73.5
No	40.8	26.7	26.5
Have close friend or relative who has successfully recovered from drinking problem:			
Yes	44.3	56.6	59.2
No	55.7	43.4	40.8

samples (which do not include the same respondents from survey to survey).

Program and Nonprogram Companies: 1979

A further step toward understanding the current pattern of employee alcoholism program activity in these major corporations lies in comparing characteristics of respondents and companies where programs are and are not present. Thus we are comparing the 56.7 percent of the respondents who reported program presence with the 35.7 percent who reported no program, excluding from these analyses the 7.6 percent who did not know about program presence. We first examine some of the relevant attitudinal and experiential characteristics of the respondents and then turn to some of the reported features of the companies in which they are located.

Perceptions of Alcohol Problems

As indicated in table 8, 86.2 percent of the respondents in companies with programs reported that their companies saved money by having a program, while only 22.3 percent of the nonprogram respondents projected that their companies would save money by having a program. This brings into question the effectiveness of using a cost-benefit argument to generate program adoption in companies without them.

Data on the perceptions of program and nonprogram executives about the national and local scope of alcohol problems do not indicate sharp differences between the two groups in their perceptions of national problems. There is, however, a trend toward lower national estimates among nonprogram respondents.

Statistically significant differences were found in the estimates of alcohol problems within respondents' companies: two-thirds of those in companies without programs and one-third of those in companies with programs believed alcohol abuse was not really a problem. This finding, coupled with the finding that only 8.5 percent of nonprogram executives perceived a major employee alcohol problem in their company, does not support the high-prevalence approach. This is the strategy whereby an external change agent attempts to induce program adoption by persuading decisionmakers that they have a major problem with alcohol abuse in their companies; this approach is incompatible with the perceptions of most nonprogram respondents in this sample.

Nonprogram executives, compared with program executives, consistently reported lower estimates of alcohol problems across all organizational strata. The differences in estimates between the two groups tend to decrease with increasing organizational level. The differences in estimates of some degree of problem for top management personnel, although low (20.6 percent program and 10.7 percent nonprogram), are not significantly different for the two groups, while the differences for the other strata indicate significantly lower problem estimates among nonprogram respondents. The greatest difference is in estimates for blue-collar employees: 50 percent of the program respondents and 21.4 percent of the nonprogram respondents estimated some degree of problem for the blue-collar stratum.

Both groups estimated the greatest proportion of problems for the lowest echelon. For those with programs, their estimates of problems in the lowest echelon were significantly higher than their estimates for other strata levels. With the exception of the difference between blue-collar and clerical employees, the differences in estimates between the various strata are not significant for nonprogram respondents. Thus, the data indicate that nonprogram executives tend not to perceive stratum-specific alcohol abuse problems in their companies; this finding argues against external change agents' attempting such an approach to convince nonprogram executives to implement a program.

By contrast, the pattern of estimates among program respondents is distinctive in terms of the relatively high degree of perceived problems among blue-collar employees. This finding may be interpreted in two ways: programs are more likely to be established where a significant problem is perceived in the lowest echelon, or the implementation of a program generates and/or supports the perception that alcohol abuse problems are more frequent at this level. The actual differences in alcohol problems across social strata are a matter of some controversy in the research literature; measurement techniques may be biased against lower strata to the extent that they measure social and physical

visibility of behavior (Roman 1974; Trice and Beyer 1977). The perceptions indicated by these data point to the need either for discerning accurate prevalence across strata levels or for fully investigating the possibility that programs tend to be focused heavily on lower echelon employees due to the relative visibility of job performance at this level.

Experience with Alcohol Problems

Direct experiences with alcohol problems among company employees are more likely among program executives, but this finding is not statistically significant. There are essentially no differences between the groups in experience with friends or relatives who have, or who have recovered from, drinking problems.

The 1979 survey also included detailed information on the respondents' experience with problem-drinking subordinates during the past 3 years. These data are not comparable with the data collected in the 1976 survey, where the timespan included the respondents' total tenure with the organization. Of those respondents in companies with programs, 35.4 percent reported having had to deal with a problem-drinking subordinate in the past 3 years, compared with 20.9 percent of the respondents in nonprogram companies—a significant difference. Of those program executives with this experience, 66.6 percent reported that the subordinate achieved control over the drinking problem, 11.1 percent said the problem was still being treated, and 22.2 percent indicated the subordinate failed to achieve control. By contrast, 47.9 percent of the nonprogram executives reported a successful outcome, 10.4 percent reported that the subordinate was still in treatment, and 41.7 percent reported that the subordinate failed to achieve control.

Thus, one-third of the executives in program companies had recently dealt with a problem, compared with one-fifth of those in nonprogram companies. Although the outcomes are significantly more likely to be successful in the program companies, nearly half of the nonprogram respondents reported successful outcomes.

This finding points to the advantages of a formal program in terms of extent of identification and outcome, but it also indicates that employee alcohol problems are being dealt with in companies without programs. Field consultation activity should be guided by the fact that providing assistance to problem drinkers is not necessarily new to nonprogram executives. Further, instances of reported success underline the importance of building a formal program on prior experience rather than assuming that efforts to deal with problem drinkers inevitably fail unless a formal program is present (Roman 1977).

Drinking Behavior of Respondents

Although no direct evidence is available, it is sometimes asserted that the presence of an employee alcoholism program in a company has a positive effect on the drinking practices of employees.

The surveys classified drinking behavior into four categories on the basis of respondents' reported quantity and frequency of consumption of liquor, wine, and beer. Using Armor et al.'s (1977) formula, which assigns weights on the basis of the type and amount of beverages as well as the occasions of reported drinking of each beverage, researchers can convert combined consumption patterns of these beverages into amount of ethanol (undiluted ethyl alcohol) consumed daily by the respondents. Each Executive Caravan respondent completed a postinterview questionnaire which included questions on the frequency of consumption of the three types of beverages, with categories ranging from "more than once a day" to "never," and questions on the typical quantity of each beverage consumed. Quantities of liquor were based on "drinks" (each containing 1-1/2 ounces of liquor), wine use was based on "glasses" (4 ounces each), and beer use was based on "cans" (12 ounces each). Different ethanol content was assigned to each of these, multiplied by consumption frequency. The daily ethanol levels used as the basis for assignment to consumption level were as follows:

	Ounces of Ethanol Consumed per Day
Heavier drinkers	1.00 or more
Moderate drinkers	0.22 — 0.99
Lighter drinkers	0.01 — 0.21
Abstainers	0

A second measure of drinking among executives investigated problem drinking. The 1979 Executive Caravan survey included a list of seven behaviors regarded as symptomatic of problem drinking, with respondents indicating how frequently they engage in such behaviors. Total responses to these items were scored similarly to the scoring carried out by Johnson et al. (1977) with a 16-item symptom scale; the effects caused by the difference in the number of items used in the two studies were controlled so that legitimate comparisons could be made.

No clear differences between program and nonprogram executives are evident in terms of alcohol consumption. Slightly more than one-fourth of each group were classified as heavier drinkers, while the majority were classified as moderate drinkers. Very few reported themselves to be abstainers. Although 64.4 percent of program executives and 56.1 percent of nonprogram executives are in the nonproblem behavior category, the difference is not significant. Reported worry about drinking is similar for the two groups, with about one-fifth

of each answering affirmatively. Although 37.6 percent of executives in companies without a program were more likely to have reduced their drinking over the past 5 years compared with 27 percent of the program group, the difference is not significant. There is no pattern of differences between the two groups in reported drinking on work-related occasions; the majority of both groups would be likely to drink at an office Christmas party, nearly half would probably drink at a business lunch, but only one-fifth would routinely have a drink with coworkers at lunch. These data, therefore, do not support the hypothesis of a program having a salubrious effect on executive drinking behavior.

Job-Related Pressures and Stresses

It may also be hypothesized that the presence of a program reflects broader efforts to reduce work stress in a company. A related notion is that programs are more likely to be adopted in settings where there is a positive atmosphere with an orientation toward promoting employee mental health.

Data from the 1979 survey provide a partial test of these possibilities, comparing program and nonprogram executives on four work stress items: degree of caring about the job; job-related time pressures; being held responsible for uncontrollable events; and being tense, worried, or upset about the job. No differences of consequence were indicated. Of interest is the finding that over 80 percent of these executives reported job-related time pressure and about 67 percent indicated being held responsible for events beyond their control. The majority, however, reported relatively few job stress consequences in terms of tension and worry.

General Company Characteristics

The association between several general environmental characteristics of companies and the presence of a program was explored, with the data arrayed on the assumption that these conditions did not necessarily predate program adoption.

Programs are more likely to be found in companies reporting an orientation toward the importance of employees' personal welfare and happiness, an attitude that may reflect a degree of company paternalism; this association is not statistically significant, however. The broader idea of corporate social responsibility to the community, as indexed by reported company concern about community social problems, was strongly associated with program presence: 59.2 percent of the respondents in program companies reported that this organizational feature strongly characterizes their organizations, compared with 29.9 percent of the nonprogram respondents. Significant financial problems were not associated with program presence, and such problems were reported in less than 10 percent of all of the organizations. Finally,

relationships between labor and management were not associated with program presence.

Thus, the presence of an attitude of corporate social responsibility differentiates those companies that have and have not adopted programs. To an extent, programs are more likely to be adopted when the company has a somewhat paternalistic attitude toward employee welfare, a notion overlapping, but distinct from, the idea of corporate social responsibility. Though a strong association exists between program presence and degree of unionization, there is no evidence that the quality of labor-management relations is associated with program adoption.

Composition of the Work Force

A relatively strong association was found between the degree to which blue-collar employees dominate the work force and the presence of a program. While 46.6 percent of those companies with no blue-collar employees reported having programs, programs were found among 70.8 percent of those companies with over 75 percent blue-collar workers. This finding may be linked to the respondents' perceptions of greater alcohol abuse problems among blue-collar employees; that is, where the work force is heavily blue-collar, there may be a higher degree of perceived need for a program.

The relationship between the sex composition of the work force and program presence is curvilinear. Where the work force is dominated by males or by females, program presence is significantly more likely than where there is an even distribution of the sexes.

Receptive and Nonreceptive Executives: 1979

In addition to exploring the nature of those settings that do and do not have programs, it is important to establish the correlates of receptivity to program development. To do this, the 35.7 percent of the respondents who reported having no program were split into two groups on the basis of their response to the question "Would you be in favor of establishing a program in this company to identify and provide assistance to employees with drinking problems?" Of those respondents in organizations without programs, 46 percent were receptive to program development and 54 percent were not. This is a reversal of the 1976 percentages, where 54.2 percent of the nonprogram respondents indicated receptivity and 45.8 percent did not. We will first examine attitudinal and experiential characteristics of receptive and nonreceptive respondents and then turn to the features of the organizational environments in which they are located.

Perceptions of Alcohol Problems

Significant associations exist between receptivity and perceptions of alcohol problems at both national and company levels. Receptive executives were significantly more likely to perceive problems of more gravity in both the Nation and their own organization. In terms of perceiving *any* degree of problem, 85 percent of the receptive executives perceived serious national alcohol problems while 74 percent of the nonreceptive respondents did also—a nonsignificant difference. On the other hand, 39 percent of the receptive executives reported some degree of perceived alcohol problems in their companies, while this was true of only 25 percent of those who were not receptive—a significant difference.

In terms of perceptions of alcohol problems at different organizational levels, receptive and nonreceptive executives showed nearly identical figures in estimating problems at the highest and lowest organizational levels. Differences were found at other levels, however, where receptive executives were significantly more likely to perceive alcohol problems among middle management and staff employees, with trends toward perceiving greater problems among firstline supervision and clerical employees. Receptive executives tended to perceive the greatest problems among middle management, while nonreceptive executives perceived the most problems among blue-collar employees.

It is important to note that, for all strata, the vast majority of both groups reported that alcohol abuse was “not really a problem.” That one-fourth of the receptive respondents perceived a problem among middle management is exceptional and may be useful for change agents if they can offer effective means to penetrate this stratum. These unexpected data should also guide change agents toward allowing decisionmakers to report their own perceptions of problem location, since their perceptions do not correspond to the “equal distribution” assumption.

Experience with Alcohol Problems

It has been argued frequently that direct experience with alcohol problems may be a necessary ingredient in receptivity to the extent that it renders such problems salient to the individual. The 1979 data do not show a significant difference in the extent to which receptive and nonreceptive executives knew company employees with drinking problems (about one-third of each group), but there were significant differences in personal life experiences.

Receptive executives were significantly more likely to have had a close friend or relative with a drinking problem (78.6 percent vs. 66.9 percent) and to have been acquainted with someone who had recovered from a drinking problem (64.4 percent vs. 52.6 percent). One-third of the nonreceptive executives thus have had no direct acquaintance with a problem drinker in their personal lives, and almost half have had no direct exposure to the recovery process. While these findings

are expected, they do not offer specific strategies for change agents; an outsider cannot synthesize experiences with alcohol problems or with recovery for another person. The extent to which specific efforts at alcoholism education can approximate such personal experiences remains unknown.

Drinking Behavior of Respondents

Using the categories outlined in the previous section, this author explored receptivity in relation to personal drinking behavior. Presumably, the drinking behavior of an individual can affect his or her attitude toward programs dealing with drinking problems. A frequent assertion is that nonreceptivity to employee alcoholism programs is based on an individual's own problems with alcohol. Assuming that respondents offered truthful responses to this portion of the survey, the results do not support this assertion. Patterns of alcohol consumption were practically identical for the two groups. Although none is statistically significant, the differences between the groups in terms of problem class, worry about drinking, and change in drinking indicate slightly more undesirable behaviors among the receptive respondents. There were also no substantial differences in terms of work-related occasions on which the respondents would be likely to have one or more drinks.

Job-Related Pressures and Stresses

The relationship of receptivity to job stress was also examined. Working in a stressful environment may predispose executives to favor an intervention effort to deal with the consequences of stress, and an employee alcoholism program might be viewed in that context. The data do not support this hypothesis. The distributions are nearly identical in terms of job involvement, work under time pressure, and job tension and worry. There are some modest, nonsignificant differences indicating that nonreceptive executives were more often held responsible for events that were beyond their control.

General Company Characteristics

It might be expected that general features of the organizational environment are related to receptivity. Although a significant positive association was found with corporate social responsibility, there was only a trend in this direction with the reported extent of paternalism toward employee welfare on the part of top management. Data on reported corporate financial problems were practically identical for the two groups. Receptive executives reported less-than-ideal labor-management relations significantly less than nonreceptive executives. Thus, attitudes of corporate social responsibility and positive labor-management relations appear to facilitate receptivity.

A fifth factor which is significantly related to receptivity provides some direction for change-agent efforts. The data indicate that

nonreceptive executives were significantly more satisfied with existing procedures to handle problem-drinking employees within their organization, and conversely, over half of the receptive executives were less than satisfied.

It should be noted, however, that only 12.7 percent of the nonreceptive executives reported what might be regarded as full satisfaction with their existing procedures for dealing with problem drinkers; the remainder may believe that either some or much improvement is in order. As was stated in the analysis of the 1976 data (Roman 1977), this information offers firm direction for external change agents. Although it is evident that the nonreceptive executives did not perceive high degrees of alcohol problems in their company and did not believe that their company would save money by having a program (less than 1 percent so indicated), the majority indicated less-than-full satisfaction with existing procedures for dealing with the problem.

Since 23.3 percent of the nonreceptive executives had dealt with a problem-drinking subordinate in the past 5 years (and about half of these with reportedly successful outcomes), it appears that a firm foundation for program development can be built on "*indigenous*" programs, which are to some degree functional but with which the majority of nonreceptive executives are less than fully satisfied. Such an approach contrasts with the "salesmanship" approach, based on cost-savings and prevalence estimates, which may have "turned off" these persons from "adopting" a program. By contrast, these companies may have a base on which to improve and develop; this base may be a better route to pursue than the use of questionable facts and figures to "sell" an "innovation."

The advocacy of this strategy should be tempered by comparing 1976 and 1979 data: findings indicate that there was less dissatisfaction with "*indigenous*" procedures in 1979. The proportion of nonreceptive executives who indicated that current procedures were inadequate dropped significantly, from 47.4 percent to 34.8 percent, while the proportion of receptive executives with this attitude dropped only slightly, from 60.8 percent to 55.8 percent.

Composition of the Work Force

In terms of work force characteristics, the data show higher degrees of receptivity in organizations with relatively few blue-collar workers. This is the reverse of the previous trend where actual program adoption was positively associated with the proportion of blue-collar employees. A similar reversal was found with sex composition. Whereas program adoption was more likely in organizations where one or the other sex was highly dominant, the data show the highest receptivity in organizations where the work force is about 30 to 40 percent female and the least receptivity where the female proportion is very high or very low.

There is a partial trend toward a positive association between size and receptivity, reversed in medium-large and very large organizations,

The data relative to unionization show no clear relationship between degree of unionization and receptivity to program adoption. Finally, in terms of function, financial, insurance, and utility companies tend to be the most receptive to program adoption, with transportation, banking, and industrial concerns the least receptive.

Summary

The following summary of the foregoing analysis is intended to serve as a guide for programmatic efforts to enhance the further adoption and development of employee alcoholism programs in major private sector corporations:

- On the basis of trends since 1972, the growth in the number of programs between 1976 and 1979 was smaller than expected. Redirection of diffusion efforts and/or increased resistance are possible explanations for this apparent slowing of adoption.
- Compared with 1976, programs reported in 1979 were considerably more substantial in terms of structural and procedural ingredients. Support of top management and unions increased substantially during the 3 years.
- Corporate social responsibility is the most commonly reported single reason for program adoption, and the presence of this orientation significantly distinguishes companies that do and do not have programs.
- In unionized companies, the active involvement of unions in program operation is now found in over half of those companies with programs.
- Executives reported nearly universal satisfaction with their programs' achievements and indicated high degrees of knowledge about program functioning.
- Compared with 1976, company medical departments are becoming more common as the base for program operation.
- The majority of programs reportedly emphasize self-referral as the principal mode of referral or as of at least equal importance to supervisory referral.
- While there were no clear differences in reported patterns of referral, the highest prevalence of drinking problems was perceived at the lowest organizational levels. This difference is most distinctive in companies with programs. Programs are more likely to be adopted where the majority of the work force is blue collar.
- Programs are more likely to be adopted when women constitute a relatively low or a relatively high proportion of the work force.
- On the whole, executives did not perceive high degrees of alcohol problems in their companies. There was a wide discrepancy in the extent to which national-level and company-level alcohol problems were believed to exist.

- The presence of a program had no discernible effect on the alcohol consumption patterns or the reported consequences of drinking among executive-level respondents.
- Executives in companies without programs show a trend toward greater resistance to program adoption. There was a significant decline in the belief in the cost-effectiveness of programs among nonprogram respondents, and none of the nonreceptive respondents believed programs to be cost-effective. Nonprogram respondents are also significantly less likely to believe that substantial employee alcohol problems exist in their companies.
- Nonreceptivity to program adoption is not associated with personal drinking behavior.
- Nonreceptive respondents are significantly less likely to have been exposed to alcohol problems or to the recovery process in their personal lives.
- While executives in companies with programs were more likely to have dealt with a problem-drinking subordinate and to have had a successful outcome, substantial proportions of nonprogram and nonreceptive executives reported similar experiences.
- Although satisfaction with current procedures to handle problem drinkers is associated with being nonreceptive to formal program adoption, only a small minority of nonreceptive executives were fully satisfied with these procedures, thus providing a point of entry for change agents.

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Chapter 7

Evaluation of Occupational Alcohol Programs

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Abstract

This paper reviews three types of evaluation research on occupational alcohol programs: outcome assessments, monitoring studies, and evaluations of economic efficiency. The vast majority of impact evaluations conducted to date have reported high rates of success attributable to occupational alcohol programs, on a wide range of outcome criteria. Evaluation research monitoring the success of alcohol program implementation has revealed limited success in reaching high status employees and failure to achieve optimum cooperation from supervisors and union representatives in utilizing the alcohol policy of the organization. Measures of the economic efficiency of occupational alcohol programs, while showing positive cost-benefit ratios for the majority of programs to which they have been applied, are limited by lack of specificity in defining program inputs and outcomes and by exclusion of nonpecuniary costs and benefits. Future evaluation research on efforts to reduce alcohol problems among employed people will be dominated by studies assessing the impact of broadly focused employee assistance programs (EAPs). This implies the need for a shift in evaluation strategy to include investigation of specific mechanisms that are effective in preserving attention to alcohol problems within programs designed to offer assistance to employees having any type of problem.

Introduction

Like evaluation research on social action programs in general, studies conducted to evaluate occupational alcoholism programs fall into three separate categories, corresponding to the stages of program implementation and development. First, monitoring studies are conducted to assess the extent to which a given occupational program is being implemented in accordance with its goals and objectives. Second, impact (or outcome) evaluations assess the extent to which an occupational program successfully modifies the behavior of alcoholic or problem-drinking workers. Third, studies of economic efficiency assess program costs in relation to the benefits obtained. The present review of occupational alcoholism program evaluation will begin with a discussion

of studies on impact assessment, the most common type of program evaluation found in the literature.

Impact Evaluations

The great majority of evaluation studies assessing the impact of occupational alcohol programs are comparisons of indicators of job behavior prior to and following participation in the program.

Among the most common criteria that have been used to assess the impact of intervention is job retention. Illustrative of this approach is a study by Clyne (1965) reporting the outcome for 107 problem drinkers seen during the first 3 years of American Cyanamid Company's alcoholism rehabilitation program. Three years following program implementation, 46 of the workers were actively employed and undergoing rehabilitation, 4 had retired, 2 had died, 2 were hospitalized, and 15 had been terminated. Thirty-eight had refused treatment but were still employed. If the criterion of job retention is applied, the success rate is 78.5 percent.

Of 163 workers referred to a multiemployer/union alcoholism treatment program in Baltimore, 79 percent were still employed 1 to 1-1/2 years following referral. Job retention was higher for those who had successfully completed treatment or were in treatment at the time of followup (91 percent) than it was for those who dropped out of treatment (71 percent) (Schramm et al. 1978).

Franco's study (1960) of Consolidated Edison's alcoholism program over the period 1952 to 1957 showed that 60 percent of those referred to the clinic who remained in treatment for at least 1 year retained their jobs. While those who refused treatment also had a high rate of job retention (57 percent), only 25 percent of them were judged to have been rehabilitated, compared with a 60 percent rehabilitation rate among workers who accepted treatment.

The finding of a high percentage of job retention among workers refusing treatment in the Schramm et al. and Franco studies may reflect the element of crisis precipitation underlying the constructive confrontation strategy used in these occupational alcohol programs. With reference to the employees in Consolidated Edison's program who refused treatment but remained employed, Franco (1960) notes: "These were largely the early-type alcoholic and problem drinkers. In some of these cases, the personal crisis precipitated by the probation procedure may motivate them to stop or control their drinking." Presnall (1978) argues that:

The various nonalcoholism abuses are often seen to cause as much, or more, work disruption, accidents, and extra overtime cost as does late middle-stage alcoholism. There are educational and work community social controls which can reduce these costs and the alcohol abuses themselves. But alcohol abuse, per se, is not treatable, so therapy-

oriented functions of alcohol controls are not applicable (in such cases).

In addition to job retention, criteria of program success frequently used in evaluating the outcomes of occupational alcoholism programs include improvements in overall job performance and reductions in rates of absenteeism, accidents, sickness and disability, and disciplinary and grievance procedures. For example, defining recovery as improved work performance, attendance, and attitude as well as 2 years of continued active employment following identification, Cannick and Marchesini (1977) reported a recovery rate for Metropolitan Life's alcoholism program of 63 percent for workers identified in the program between 1961 and 1972.

Asma et al. (1971) reported on 402 employees seen at Illinois Bell Telephone Company's alcoholism program on whom adequate records existed at least 5 years before and 5 years after referral. The level of absenteeism 5 years after referral was about one-half of that 5 years before, and job efficiency, as evaluated by supervisors, increased substantially, with 58 percent rated as "good" 5 years after referral, compared with 22 percent so rated in the 5 years before.

In their review of 278 Esso employees in 18 States, 8 years after treatment, Thorpe and Perret (1959) found that 47 percent were abstinent, 20 percent improved, 14 percent had been terminated, and 19 percent had retired or died.

Smart (1974) studied the behavioral outcomes of workers referred by company alcoholism programs to two treatment clinics in Ontario. Employees were evaluated 12 months following discharge from treatment. With respect to drinking, 59 percent had improved highly, and 25 percent showed moderate improvement. On overall behavior (based on seven indexes of behavior), improvement was high for 35 percent and moderate for 54 percent. Supervisors' ratings revealed significant improvement on work performance and drinking for the 75 percent who were still employed at followup.

In general, companies that have adopted alcoholism programs have reported success rates ranging between 50 and 70 percent, with an average success rate of 66 percent for industry nationwide (Von Wiegand 1972). By contrast, a review of 22 evaluative studies of alcoholism treatment in nonwork settings revealed success rates ranging from 4 to 75 percent, with the majority of programs (interquartile range) averaging from 18 to 35 percent (Mandell 1971). Trice and Roman (1972) summarize the evidence more specifically. If success is measured by rehabilitation (rather than simply job retention), it would appear that company programs have success rates of about 50 percent, compared with 20 percent for State hospital programs, and 10 percent for efforts directed at police-court inebriates. Moreover, compared with patients referred through other types of mechanisms, occupational alcohol programs tend to refer problem drinkers at earlier stages in the course of their problem, as evidenced by shorter treatment history, younger age at referral, lower levels of impairment at intake, and

greater social and economic stability (Moberg 1974; National Institute on Alcohol Abuse and Alcoholism 1977).

Although the vast majority of impact evaluations conducted to date have reported high rates of success attributable to occupational alcohol programs, relatively little is known about the actual processes by which the programs achieve their results. In contrast to the simple, before-after studies that predominate at present, randomized, controlled studies of alcoholic employees who are referred to occupational programs compared with those who do not participate in the program are needed to help clarify the influence of such forces as selection bias and intervening factors on program success rates. In addition, studies of the long-term impact of rehabilitation efforts on the work careers of referred workers would enlarge existing knowledge of the nature and degree of recidivism among program participants as well as their subsequent career development. Although the conditions and resources necessary to conduct such research are often lacking, the usefulness of the predominant before-after approach can be greatly extended by paying more attention to program failures and the circumstances under which they occur.

Monitoring

Although properly designed and executed evaluation research on program outcomes can determine the extent to which such outcomes occur, it does not ordinarily explain why they occur and it does not often suggest the circumstances under which better results can be achieved and more failures can be avoided. In evaluating social action programs, monitoring is an important adjunct to impact assessments. A program can fail, not because the planned intervention is ineffective, but because the program has not been implemented adequately. Two important questions in program monitoring are (1) whether the program is reaching its target population, and (2) whether services are delivered according to program design specifications.

In occupational alcohol programs, the target population is all workers whose drinking interferes with job performance. Ideally, occupational alcohol programs seek to identify drinking problems at a relatively early stage in the hopes of preventing progressive alcohol dependence. One measure of whether an occupational alcohol program is reaching its target population is the penetration rate, or the number of problem drinkers identified by the program during a given time period, divided by the number of problem drinkers in the organization's work force during the period (Williams and Tramontana 1977).

Because the number of problem drinkers in any given work force is unknown, penetration rates are usually computed using an estimate of prevalence based on the sex and age composition of the work force (Comptroller General of the United States 1970). Figures based on

casefinding in companies having effective alcoholism programs show that the frequency of alcoholism varies from 1 to 8 percent of the work force; it is highest in heavy industries having a relatively high average age and a predominantly male work force, and is lowest in light industries having a younger, predominantly female work force (Presnall 1967).

A major barrier to increasing penetration rates in occupational programs is the difficulty of identifying higher status, professional workers (Schramm et al. 1978). For example, in Trice's comparative study of problem employees (1965), alcoholics "were found in lower status job situations; less pay, fewer promotions, more dependents, less education, blue-collar jobs of a manual nature, requiring mobility rather than a fixed position." Warkov et al. (1965) conducted a study in a private utility firm with the primary purpose of investigating factors in the identification of problem-drinking employees. Comparing the characteristics of workers whom supervisors identified as having work problems due to drinking with those of a random sample of workers in the same firm, they also found that "[the] incidence of identification as a problem drinker varied inversely with social, occupational, and organizational status of employees."

Since findings from large-scale samples indicate that neither alcoholism (Straus and Bacon 1951), problem drinking (Cahalan and Room 1974), nor heavy drinking (Cahalan et al. 1969) is restricted to any one social or occupational status grouping, it seems likely that the predominance of problem-drinking workers in lower status occupations in company alcoholism treatment populations is an imperfect reflection of the epidemiology of alcohol problems in those work organizations. Trice and Roman's study (1972) of the job behaviors of deviant drinkers suggests that the nature of the work role may reinforce this tendency toward differential identification. Since white-collar jobs—especially at the professional and managerial levels—are subject to less supervision, are less interdependent with the work of others, and afford more opportunities for "self-coverup," problem drinking in such higher status workers is more likely to go unnoticed than that of blue-collar employees.

Recently, Trice and Beyer (1977) found that implementation of the alcoholism policy in a sample of Federal civil service installations was significantly greater when applied to relatively low-status, low-skilled employees as compared with higher status levels of employees. Supervisors of skilled employees 'saw few organizational rewards for themselves in using the policy and voluntarily indicated, far more often than supervisors of lower status employees, that they saw the policy as punishing to themselves.' Presnall (1978) notes that industries with more successful higher status casefinding techniques have begun to develop control functions designed to reward supervisors for good implementation of policy and to penalize them for camouflaging alcohol-related problems.

With respect to the second major question with which program monitoring is concerned, Edwards' review (1975) of evaluation studies of job-based alcoholism and employee assistance programs concluded that in at least half of the programs, activities were not being conducted in accord with program design specifications.

In their study of the implementation of the Federal civil service alcoholism program, Beyer and Trice (1978) assessed factors associated with compliance and noncompliance with the alcoholism policy. They found that both familiarity with the policy and readiness to implement it were low among supervisors and directors. With respect to organizational factors, a consistent predictor of nonimplementing installations was centralization of power and authority at the higher levels.

There is reason to believe that with substantial promotional activity in this area, underutilization and nonutilization of occupational alcohol programs are becoming increasingly common. Companies that adopted programs before Federal sponsorship became widespread in the 1970s were influenced to do so largely by a key individual or individuals within the company, rather than by "change agents" who designed the programs and policies for them (Riley and Horn 1973). In contrast to such programs, those developed primarily through the impetus of people outside the organization face multiple problems of implementation as they compete with management's and labor's other pressing priorities (Schramm 1977).

In the absence of strong commitment and cooperation by management and labor, program implementers from outside the organization should make certain that there is at least one person in the organization (e.g., alcoholism coordinator, personnel director, company physician) who is responsible for and committed to the alcoholism program. Experience from a multiemployer/union consortium in Baltimore indicated that in companies lacking such an individual, identification and referral were impossible, regardless of the announced commitment of cooperation from high levels within the organization (Schramm et al. 1978).

The traditional coverup and stigma associated with alcoholism programs is another barrier to maximum acceptance, implementation, and effectiveness of industrial alcoholism programs. This barrier to implementation—which is not restricted to high status workers—can be overcome, however, if those entrusted with the program are sufficiently committed and persistent in their efforts to make the program work. Reporting on the experience of the counseling unit of the New York Police Department, Dunne (1977) compared an evaluation of police officers seen by the counseling unit in 1967 and 1968 with data over the subsequent 6 years. Whereas the men treated in 1967 and 1968 had a mean age of 37.4, an average of 17 years' service, and an alcohol problem of 9 years' duration before identification, data from subsequent years show an increase in voluntary admissions and a gradual lowering of the mean age at admission to 34.9, and of average years of service

to 9.7. These figures indicate that the program was achieving earlier intervention into the problem-drinking cycle over time.

Another crucial ingredient in occupational alcohol program implementation is supervisory and shop steward training (Belasco et al. 1969; Roman 1978; Smithers Foundation 1967; Trice and Belasco 1966, 1968). Because the success of industrial alcohol programs depends on the willingness of supervisors to confront employees with drinking problems, an important consideration in designing supervisory training approaches is detecting and overcoming barriers to identification of alcohol problems. From an experimental evaluation of several types of approaches to training supervisors to identify employees with drinking problems, Belasco and Trice (1969) found that training oriented toward general principles of supervision was more effective in creating readiness to confront a problem-drinking employee than was training oriented toward alcohol problems per se.

Despite increasing attention to program monitoring in recent years, much occupational alcohol program evaluation research is performed on the assumption that program policies and procedures, if properly implemented, will result in the desired outcomes. But the results of research on monitoring the implementation of programs that have been conducted to date suggest the need for more studies designed specifically to explore the relationship between program procedures and program outcomes. The effect of the relationship between referring supervisors and treatment personnel on employee recovery, and the comparative effectiveness of different treatment agencies and approaches, are examples of important issues that can be clarified with well-planned and well-executed monitoring studies designed in conjunction with impact evaluation.

Economic Efficiency

Emphasis on explicit economic criteria for relating program costs to benefits obtained has become stronger in recent years owing to the increased activity and involvement of Federal and State agencies in funding and monitoring occupational alcohol programs. Because of pressures on funding agencies to justify expenditures of public monies for social action programs, attempts to assess economic efficiency are becoming an increasingly common component of occupational alcohol program evaluations. Additionally, those concerned with the diffusion of occupational alcohol programs often rely on estimates of cost-benefit or cost-effectiveness as a basis for convincing employers to adopt such programs.

Cost-benefit analysis expresses the economic efficiency of a program as the relationship between costs and outcomes, most often measured in monetary units. In planning a program, ex ante cost-benefit analyses may be undertaken on the basis of anticipated estimates of

costs and benefits of programs. Such estimates are not necessarily empirically based. Ex post cost-benefit analyses are undertaken in the impact assessment phase, preferably after a program has been shown to have a significant impact, to determine whether the costs of the intervention can be justified by the magnitude of net outcomes.

There have been several partial attempts to measure the economic efficiency of occupational alcohol programs, ex post. Hilker et al. (1972), for example, compared the number of sickness disability cases of 402 employees participating in Illinois Bell Company's alcoholism rehabilitation program 5 years before treatment with the number of such cases 5 years after treatment. Multiplying the average duration of disability cases (50 days) by the daily cost for wage replacement (\$30), they estimate a savings of \$1500 per case, or a total of \$459,000 estimated savings attributable to the 306 case reductions following treatment. The Allis-Chalmers Company reported an annual savings of \$80,000 in reduced absenteeism among referred workers to its alcoholism program (Smithers Foundation 1967), and the alcohol and drug recovery program of General Motors' Oldsmobile Division registered a reduction of \$226,344 in the cost of lost work hours in the year following treatment (Alander and Campbell 1973).

Although the above studies all report substantial savings due to treatment, each used estimated averages in key areas of cost savings and none provides cost comparisons with nonproblem workers or with problem workers who refused treatment. One study is suggestive in this respect. Using data from the E. I. du Pont de Nemours & Company medical program, Pell and D'Alonzo (1970) found that absenteeism among recovered alcoholics was 11.7 days per year, compared with 19.4 among known, uncontrolled alcoholics. Nevertheless, sickness absenteeism was substantially greater among recovered alcoholics than among the nonalcoholics, who averaged only 5.4 days of sickness absenteeism per year.

Winslow et al. (1966) compared the costs to the employer of three matched samples of employees within two working populations—suspected problem drinkers, miscellaneous problem employees, and problem-free employees. Data were obtained in four cost areas: impaired productivity; disciplinary, grievance, and garnishment procedures; absenteeism; and health insurance claims and sick benefit payments. Both problem-drinking and other problem employees were almost twice as costly to the employer as the nonproblem employees. Cost changes over time were then calculated for three samples of workers drawn from one of the companies: those who accepted remedial recommendations; those who did not follow through on recommendations; and those for whom no recommendations were made. The employees who followed through on treatment recommendations showed a slight reduction in costs to the company following intervention, and those who did not follow through showed a slight increase in such costs. However, the differences in costs were not

statistically significant, and economic efficiency of the remedial intervention was not established.

To date, cost-benefit analyses in the occupational alcohol programming area that specify costs of the program in relation to its benefits have been of the *ex ante* type. One example is the Comptroller General's (1970) estimate of annual savings of \$135-\$280 million from establishing an alcoholism program for Federal civilian employees. This estimate was developed on the basis of several assumptions: a treatment program would cost the Federal Government \$15 million (\$5 per employee per year); rates of prevalence range from 4 to 8 percent of the Federal civilian work force; the annual costs to the Government due to alcohol problems among its employees are \$275 to \$550 million (assuming a loss due to alcoholism of 25 percent of average annual salary); and 54 of every 100 alcoholic employees would recover as a result of the Federal treatment program.

The discrepancy that can occur between projection and reality is clear in the evaluation of the Federal program's implementation (Beyer and Trice 1978). The actual prevalence of cases of problem drinking detected at sample installations 3 years after the program had begun was 3.3 percent, or 1.1 percent per year. Of the cases identified, only 32 percent resulted in a course of action suggested by the policy (treatment, counseling, or use of sick leave). The outcome of these cases is unclear, but the authors' reports of supervisors' impressions of job behavior of workers after identification suggest that the rate of "recovery," the criterion upon which cost savings were projected, falls considerably short of 54 percent.

Another example of an attempt to estimate program benefits in relation to costs involved a computer simulation of costs and benefit factors pertaining to 15 occupational alcohol programs. On that basis, Schlenger et al. (1976) projected that employers' investment would result in cost savings.

Swint et al. (1978) have recently proposed the most sophisticated and precise model available to estimate the economic efficiency of industrial alcohol programs. Applying a cost-benefit paradigm, their approach uses a discounted summary of attributable program benefits less program costs to determine net economic impact on the firm of rehabilitating alcoholic employees. Their model can be adapted to project economic impact of future as well as current rehabilitations, and it specifies collection of data that could be used to derive several internal rates of return of particular interest to a given firm. To apply the model, the following data would be required: costs of the rehabilitation program (direct program expenditures and indirect cost of the work loss of patients while in treatment); premature replacement costs averted and likelihood of premature replacement; and reductions in costs of absenteeism, reduced productivity, sick leave, health insurance payments, and postseparation disability attributable to treatment.

At the present time, it is difficult if not impossible to utilize many of the recent sophisticated developments in cost-benefit analysis, owing to

problems of measurement and conceptualization, requirements for extensive data, and the diffuseness of the actual resource allocation processes in occupational alcohol programs. However, although specific applications and conclusions may be questionable, the discipline imposed by cost-benefit analysis does force the evaluators and program planners to specify economic considerations that might otherwise remain implicit or unstated.

Current Research and Future Trends

One consequence of the emergence of the Federal Government as a sponsor of occupational alcohol programs has been a shift in the emphasis of the preferred program. Before the creation of the National Institute on Alcohol Abuse and Alcoholism (NIAAA), occupational alcoholism policies and programs, with few exceptions, were designed to provide assistance solely to the problem-drinking employee. On the basis of its survey of existing programs and of knowledge in the field, however, the Occupational Programs Branch of NIAAA (1972) endorsed the "broad-brush" approach as the ideal strategy for occupational alcohol programs.

Also referred to as troubled employee or employee assistance programs, the broad-brush approach advocates extending the identification, referral, and treatment capabilities of the conventional program to provide assistance to all employees with poor work performance, whether their problem is related to alcohol or not. Responsibility for the confrontation is shifted away from the supervisor to the counseling department or the employee assistance coordinator. Supervisors need perform only their traditional role, i.e., observing the job performance problems of employees. Supervisors are instructed to refer any and all job performance problems to the counseling service, where, with the employee's confidentiality protected, the nature of the problem and the best course of action will be decided (Wrich 1974).

Employee assistance programs (EAPs) pose a substantial challenge to those concerned with evaluating the impact of efforts to reach workers with alcohol-related problems. Some of these challenges are illustrated in current efforts by the State of Indiana's Department of Mental Health to develop and diffuse EAPs throughout the State (Consortium for Human Resources 1979).

First, because many problems other than those associated with alcohol can cause diminished work performance, NIAAA (1972) has estimated that only about half of the referrals made under an EAP will be for problem drinkers. Data from four EAPs in Michigan (Foote et al. 1978) conform rather closely to this estimate. In a context such as this, impact evaluators must take care to specify the exact nature of the problems being treated under the program. Clearly, a head count of the number of workers referred to treatment will not provide valid, reliable

information on the extent to which EAPs are reaching problem drinkers. A major rationale behind adopting the employee assistance strategy was that it was the most effective means of reaching problem drinkers (National Institute on Alcohol Abuse and Alcoholism 1972). Roman and Trice (1976) have noted a tendency, however, for the EAP approach to become an end in itself, with program satisfaction developing on the basis of the number of persons seen and assisted, regardless of the nature of their problem. Such a trend is discernible from reports of Indiana's experience to date: Only 5 workers (or 17 percent) referred during the first 9 months of Indiana's pilot EAP had alcohol-related problems; of the remaining 24 workers identified, 8 had family or marital problems, 2 were child abusers, 5 had financial problems, and 9 had emotional problems.

Second, monitoring assessments of EAPs are rendered difficult by the ambiguity of goals and of the nature of the target population. It has been demonstrated that implementing mechanisms to reach employees with developing alcohol dependence requires complex organizational change, supervisor responsibilities, and monitoring efforts to sustain program effectiveness (Beyer and Trice 1978). Roman (1979) has warned that:

. . . to the extent that employee assistance programs deemphasize the constructive confrontation strategy, it is unlikely that persons who are moving into a cycle of dependence on alcohol and who find such drinking personally rewarding are going to be identified.

Implementing Indiana's program will be easier in many respects than implementing an alcohol-only program because its structure consists primarily of a communication link between the workplace and community treatment facilities. The potential of the workplace to serve its full preventive potential is eclipsed in Indiana's program, however, by the emphasis on referral to treatment.

Finally, measures of the cost-efficiency of EAPs could obscure their contribution to reducing alcohol-related problems unless efforts are made to partial out costs and benefits attributable to different types of employee problems. Such a problem-specific cost-benefit evaluation is not evident in Indiana's research plan, which envisions a cost-benefit analysis of savings to the employer attributable to the EAP as a whole.

Given the predominance of EAPs among all occupational programs to reduce employee alcohol problems, studies assessing the impact of such programs will dominate current and future evaluation research concerning alcohol problems at the workplace. This implies the need for a corresponding shift in research emphasis to include investigation of specific mechanisms that are effective in preserving attention to alcohol problems within the EAP strategy.

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Chapter 8

Current Trends in Treatment Programing for Problem Drinkers and Alcoholics

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Abstract

While there continues to be a moderate increase in the availability and accessibility of alcoholism treatment services and major efforts to increase and refine the options available, there are still inequities in the distribution of services, and formal treatment is not received by a majority of alcoholics identified in community surveys. A.A. remains a major resource and there has been an increase in the number of freestanding detoxification and rehabilitation facilities. Controversies about the value of continuing to invest in alcoholism treatment in general and in hospital detoxification and primary treatment are being resolved through continued research; the value of cost-effective, culturally appropriate treatment is being established through these studies and efforts are being made to develop typologies which can be used to refer subtypes to the treatment best suited to their characteristics. However, the concept of differential treatment for different varieties of alcoholics has been accepted at a conceptual level more than it has been put into systematic practice. The wisdom of continuing to invest in residential primary treatment facilities for heterogeneous groups of alcoholics has been questioned. The controversy between the medical and social models of detoxification continues. Currently there is no widely accepted systematic means for determining which intoxicated persons should be detoxified in a hospital inpatient, social rehabilitation, or ambulatory setting. The controversy over abstinence versus return to nonproblem drinking as the goal of treatment has shifted to focus on empirical studies of the characteristics of those problem drinkers and alcoholics for whom the goal is appropriate; the predominant theme remains that abstinence is the goal of choice at the current time with current knowledge.

More and more combined treatment of alcoholics and drug abusers is taking place and increasing numbers of persons with histories of past or current multiple substance abuse are being seen in existing programs. Results of recent national studies confirm the feasibility of combined treatment but are unclear as to whether separate or combined treatment is more effective. Refinements in the use of lithium and disulfiram have focused on identifying under which conditions and with which types of persons they are most effective. Similarly, studies on the effectiveness of different types of

behavioral treatment are sharpening the definition of conditions for use. Family therapy is increasingly being used with alcoholics on a trial rather than routine basis; more training is needed if it is to be widely used. A major trend is the development of specialized, culturally sensitive treatment programs and techniques to meet the needs of special populations that share some common psychosocial attributes or social status; the proportion of members of these groups in treatment is generally lower than their representation in the overall population, and these groups tend to have a higher dropout rate and lower success rate in generic programs. Evaluation of separate efforts is just beginning, and changes in treatment programming required to incorporate special needs into generic programs are being investigated.

Introduction

The period since the publication of the *Third Special Report on Alcohol and Health* (U.S. Department of Health, Education, and Welfare 1978) can be seen as one with neither startling new developments nor new controversies in alcoholism treatment. Rather, there has been a period of consolidation of gains, reflection on the controversies of recent years, and conduct of studies designed to provide empirical validation of one side or the other. There has also been concern with upgrading the quality of available treatment; concern with making quality, culturally appropriate treatment available to special population groups; and efforts at refining the study of treatment effectiveness in order to account both for variations in patient types and in specific treatment activities and settings.

The past 3 years have been characterized by a moderate increase in the availability and accessibility of alcoholism treatment and by an effort to refine and increase the treatment options available. Thus, the purpose of this paper is to review, selectively, recent developments in clinical practice and the results of evaluations of treatment which affect that practice. The paper also reviews the current status of some of the controversies that exist in the field.

In this paper, the terms "client" and "patient" are used somewhat interchangeably. The field uses both terms, reflecting the mixture of social and medical services and approaches; the terms are most frequently used in those contexts. However, perhaps the usage suggested by Milner (1977) is most appropriate: "A 'client' is a person with problems seeking 'help' in overcoming these, rather than being a 'patient' having 'treatment' for a disease. Alcohol and other drug use may lead to diseases (brain damage, liver cirrhosis, kidney and heart malfunction, etc.), but these are secondary to the drinking or drug use behavior" (p. 386).

In reviewing attempts to provide and to evaluate treatment for problem drinking and alcoholism, an important initial distinction should be made between efforts to manage and treat the acute effects of

alcohol misuse (intoxication and the withdrawal syndrome), efforts to treat the physical complications and/or consequences of acute or chronic alcohol misuse (Kissin 1977a), and efforts to treat the chronic dependence on alcohol (Baekeland 1977; Edwards 1977; Edwards et al. 1977; Pattison 1974). This paper focuses on the latter set of efforts, the treatment of chronic alcohol dependence. The overall point of view from which this paper is written is that chronic alcoholism is a complex biopsychosocial syndrome requiring the availability of a wide range of medical, psychological, and social interventions so that the appropriate combination of interventions can be provided on a planned basis for the individual. The variety of treatments proposed recently is vast, ranging from hospitalization, behavior therapy, and family therapy, to acupuncture (Whitehead 1978), marijuana (Rosenberg and Liftik 1978), logotherapy (Crumbaugh and Carr 1979), and nutritional counseling (Worden and Rosellini 1979).

Treatment Resources

The *First Special Report on Alcohol and Health* (U.S. Department of Health, Education, and Welfare 1971) did not contain any figures on the number of persons receiving treatment for alcoholism. The *Second Special Report* (U.S. Department of Health, Education, and Welfare 1974) presented data derived from the first year of operation of the NIAAA information system—over 40,000 admissions—but did not attempt to estimate the total number of clients in alcoholism treatment; the report did note the increasing availability of treatment services. The *Third Special Report* (U.S. Department of Health, Education, and Welfare 1978) discussed the growth of treatment resources and estimated the number of admissions for alcoholism treatment in 1976—over 1.5 million admissions to formal treatment and 320,000 admissions to Alcoholics Anonymous. The most recent estimates are that there have been further increases, with more than 1.7 million persons having received formal treatment for alcohol abuse in 1977 and 671,000 having participated in Alcoholics Anonymous (Vischi et al. 1980). AA membership is growing at a rate of 90 percent a year (Norris 1978).

The use of AA is an integral part of most treatment programs (Baekeland 1977; Glatt 1978; Goodwin 1979c; Moore 1979). The self-help fellowship of AA, which was established in 1935, must be considered the oldest and best established resource for alcoholics. AA is the best known resource and is considered the most useful by laypersons (Robinson and Henry 1978). AA has grown to a worldwide organization while still maintaining its basic structure and traditions (Leach and Norris 1977; Robinson and Henry 1978). In the United States and Canada, there has been a recent increase in the percentage of women and younger people affiliating with AA (Norris 1978). There has been an increase in the development of specialized groups, directed at alcoholics with common backgrounds and problems (e.g., Hispanics, professionals, gays, women).

In strict terms, AA is not a treatment program and cannot be evaluated in the same manner as other treatment methods (Goodwin 1979c; Pattison 1979). AA can serve as the main resource for the alcoholic, be part of a combined plan with formal treatment (Kinney and Montgomery 1979; Moore 1979), or serve to aid in sustaining recovery achieved through treatment (Shulman 1979). A variety of studies has been carried out to determine what personality and sociodemographic characteristics appear in alcoholics who successfully affiliate with AA (Baekeland 1977). Although no consensus has been found about which alcoholics will benefit from AA, there is general agreement that AA works for many persons and that collaboration between formal treatment programs and AA, as two complementary though differing parts of a comprehensive community system, must continue and expand (Pattison 1979).

Table 1 presents a comparison of data reported for 1977 and 1976. Reporting differences make the figures only approximately comparable; multiple data sources are used for making estimates. The totals probably include some double counting since many people were involved in more than one treatment setting (e.g., both AA and a formal program or a hospital stay followed by an outpatient experience). Different reporting categories were used so that the number of patients seen in any category can only be approximately compared from year to year. A decrease in persons receiving treatment in NIAAA-funded projects is partially accounted for by the transfer of some projects to the Indian Health Service and the introduction of this new category. The value of these estimates is to indicate that treatment is becoming increasingly available in a wider variety of settings.

More than 5,900 facilities were projected as operating alcoholism programs in 1977 (Vischi et al. 1980). Alcoholism treatment is carried out within a wide variety of specialized and general function facilities ranging from schools, correctional institutions, and jails to special alcohol hospitals. Alcoholics Anonymous remains a major resource; for many detoxification and residential programs, aftercare or continuing care is referral to AA. There were an estimated 16,957 AA groups in existence in the United States in 1977 with over 600,000 persons involved (Vischi et al. 1980).

Data are also available on the number of persons treated within NIAAA-funded projects for calendar year 1978 (Ferguson and Kirk 1979). There were 510 funded projects of which 464 were reporting. The number of persons served in all projects was estimated at 268,396, of whom 95 percent were identified as alcoholic. (There were 245,915 persons served in the 464 projects reporting.) The number of intakes at NIAAA-supported projects grew from 40,000 to 68,000 in 1978. The vast majority (85 percent) received outpatient treatment, either alone or in conjunction with inpatient treatment; the average number of visits was 10.9. Twenty-six percent of the alcoholic clients received inpatient

or other 24-hour care. The most common inpatient treatment was detoxification, either in a social setting (34 percent) or medical model

Table 1. Persons Receiving Treatment for Alcohol Abuse in 1976 and 1977

	Provider	1977 ¹
NIAAA-funded projects	260,000	337,000
Veterans Administration	133,000	97,000
Community mental health centers	113,000	N/A ³
Department of Defense	52,000	40,000
Indian Health Service	27,000	N/A
Drug abuse facilities	17,000	N/A
Private physicians	423,000	305,000
State and county mental hospitals	111,000	N/A ³
Outpatient psychiatric clinics	53,000	N/A ³
Halfway houses	36,000	36,000
Private mental hospitals	11,000	N/A ³
Short-stay hospitals	476,000	481,000
Alcoholics Anonymous	671,000	320,000
Department of Transportation (DWI)	N/A	28,000
Mental health facilities	N/A ³	260,000 ³
Total	2,383,000	1,904,000

¹ Vischi et al. (1980, table 6). Data are estimates. The source should be checked for the specific procedures used in constructing the estimates.

² *Third Special Report on Alcohol and Health* (U.S. Department of Health, Education, and Welfare 1978).

³ All mental health facilities were combined in the 1976 report; the comparable figure for 1977 is 286,000.

facility (35 percent). The most common outpatient service received was individual counseling (59 percent). Group counseling was received by 25 percent and family counseling by 9 percent. Vocational rehabilitation services were received by only 3 percent.

Thus, while the number of alcoholism treatment resources has continued to increase, inequities still need to be reduced. If 12.9 million adults and youth were identifiable as problem drinkers or alcoholics, then only 13 percent received formal treatment in 1977. Despite the increase in the availability of treatment and the decrease in the stigma, it appears that formal treatment is still not received by a majority of alcoholics identified in community surveys (Liban and Smart 1980; Smart et al. 1980). These data indicate that greater attention must be

paid to insuring widespread geographic distribution of accessible services and in conducting outreach and educational efforts that will bring into treatment a larger percentage of those in need.

Continuing Controversies in Treatment Programing

The Value of Alcoholism Treatment

Questions have been raised about the value of continuing to invest in alcoholism treatment as a result of several studies which found that nontreated alcoholics and alcoholics who received minimal treatment did equally well as treated alcoholics at followup (Armor et al. 1976; Edwards et al. 1976; Orford and Edwards 1977). These questions have generated much concern because some legislators and administrators have concluded from these studies that there is no need to continue funding alcoholism treatment (Cohen 1978; Kissin 1977*b*). Several methodological issues make that far-reaching generalization of these findings highly inappropriate. Also, other random assignment studies have demonstrated that the provision of treatment does yield improvement for many alcoholics (Clare 1977; Costello 1980; Emrick 1974, 1975, 1979; Kissin 1977*b*; Moos et al. 1978).

Reviews by Emrick (1974, 1975, 1979) and the Rand study (Armor et al. 1976; Polich et al. 1980) presented three major conclusions which can be drawn from recent treatment outcome research: (1) the majority of treated alcoholics improve in adjustment with treatment, even though many continue drinking on a reduced scale; (2) different types of treatment have little or no differential effects; and (3) treatment amount is the only treatment variable to have a significant effect on outcome.

Emrick (1979) has recently updated his earlier reviews of the alcoholism treatment literature to determine whether alcoholics increase their chances for recovery by having one treatment rather than another. The 90 randomized controlled trials that he reviewed were classified as testing (1) locus of treatment (inpatient vs. outpatient); (2) nature of admission (compulsory vs. voluntary); (3) therapy involvement techniques; (4) amount of nonbehavioral treatment (inpatient and outpatient); (5) outpatient therapy methods (traditional vs. "other" interventions); (6) chemotherapy; (7) nondrug and nonbehavioral interventions in inpatient treatment; and (8) behavioral approaches. Emrick concluded that no strong evidence exists to support the effectiveness of any more than the briefest nonbehavioral treatment in reducing problem drinking. He did find indications that some behavioral treatments are relatively effective. For Emrick, as for others, the critical factor leading to the finding of poor results is the failure to have matched clients with the treatments investigated. Treatment methods are applied indiscriminately to heterogeneous groups of alcoholics and the subgroups' differential responsivity identified post hoc. Emrick agreed that future research should focus on optimal patient-treatment interactions.

The failure to find significant differences in treatment effectiveness among varied treatment settings, types of treatment, and lengths of treatment reinforces the contention that there are complex interactions

between treatment characteristics, personality characteristics, social status variables, physical characteristics, drinking patterns, and alcohol-related problems that determine the response to treatment (Cronkite and Moos 1978; Horn 1978; Kissin 1977a; Pattison 1979). Studies that take these multiple factors into account are beginning to appear (Costello 1980; Costello et al. 1979; Cronkite and Moos 1978; Lantinga et al. 1978). Questions regarding the value of alcoholism treatment in general are changing from "should we invest" to "which type of alcoholism treatment is effective with which type of alcoholic."

The value of negative findings and their interpretations often is to force reexamination of traditional practices. Among the questions raised by the findings of Edwards et al. (1977) are (1) What are the informal social processes that aid in the resolution of alcohol problems and how can they be integrated with formal treatment (Tuchfeld 1977)? (2) How can we incorporate their strategy of "providing advice only" into our treatment repertoire (Rosenberg 1977)? and (3) What modifications could be made in the set package of treatment now applied indiscriminately to all in order to match correctly patient and treatment (Glaser 1977)?

Mulford (1979) similarly criticized the development of increasingly formalized and costly treatment programs because there currently exists no one specific treatment of proven benefit to alcoholics. Mulford (1977) stressed the need for early intervention by a community worker who links the alcoholic to existing services in order to take advantage of the natural recovery process. Rather than raising doubts about the value of alcoholism treatment in general, studies and critiques such as these continue to raise questions about the value of the unitary model of alcoholism and treatment as applied to particular varieties of alcoholics (Clare 1977; Emrick 1979; Horn 1978; Pattison et al. 1977). The negative findings reaffirm the need for studies to identify which treatment is most effective with which type of alcoholic (Horn 1978; Pattison 1979). More treatment options must be made available; this will require attitudinal and financial realignments that will, in fact, accept "minimal intervention" as a legitimate treatment option for some alcoholics and psychiatric hospitalization as a legitimate option for others (Orford and Edwards 1977).

Review of current treatment practices is difficult, however, because there still exist no widely accepted models for describing the course of treatment/rehabilitation and recovery for persons with problems with alcohol and/or other drugs. Nor are there accepted systems for describing varieties of alcoholics. The same terms are utilized by various theoreticians, practitioners, licensing bodies, and funding agencies—but their definitions often differ markedly. These variations lead to problems in evaluation, planning, and administration (Diesenhaus 1979). Especially problematic is comparative evaluation controlling for the course of treatment when different settings or environments are used for the same purpose (Berman and Klein 1977; Boche 1975). Understanding of the process and evaluation of the value of treatment

and recovery can be aided by developing a generalized widely accepted model of treatment and recovery and by utilizing the model as a framework for analysis.

Such a model was proposed by the Funding Task Force of the North American Congress on Alcohol and Drug Problems (Boche 1975). The elements include: (1) outreach, assessment, referral; (2) crisis management/detoxification; (3) primary treatment and rehabilitation; (4) transitional/aftercare/extended care; and (5) supportive services. The Task Force clearly stated that all three active treatment elements (excluding outreach, assessment, and referral) can take place in either a hospital, nonhospital, or nonresidential setting. Most treatment methods can be used in any setting and phase. Definitions of the three treatment elements are as follows:

- *Crisis management* is defined as activities associated with addressing an emergent or immediate situation perceived by a client as being threatening to the self or others. This category includes activities generally identified as protective services, subacute detoxification, and acute detoxification.
- *Primary treatment and rehabilitation* is defined as a set of intensive activities, of limited duration, designed to provide the person in treatment with a positive substitute or alternative for addiction, dependency, and associated behavioral activities.
- *Transitional/aftercare* is defined as a set of ongoing supportive activities, including professional and self-help programs, designed to maintain behavioral change. Halfway houses and similar programs may fall into this category, but depending on the program and purpose of the activity, they may also fall within crisis management or primary treatment and rehabilitation.

Another such model was part of the model benefit package for alcoholism treatment developed by the Blue Cross Association, under contract with NIAAA (Berman and Klein 1977). This model is based on reviews of the literature, deliberations of an advisory committee, and samples of utilization data. The Blue Cross research group differentiated between alcoholism treatment services that focus either on the acute phase of the illness, involving the medical complications that result from excessive alcohol consumption, or on the chronic phase, involving the psychological dependence/compulsive drinking problem itself. Acute phase services, delivered in emergency and hospital inpatient settings, are designed to arrest the medical complications of alcoholism, including acute intoxicification and the withdrawal syndrome, when they threaten life. Chronic phase services, delivered in intermediate and outpatient settings, are designed to arrest the drinking problem itself with techniques that include psychotherapy, counseling, family therapy, drug therapy, behavior therapy, followup, and aftercare.

The model benefit package covers both (a) medical services for the physical and psychiatric complications of alcoholism and (b) the nonmedical therapies that deal with the chronic drinking problem. The treatment of medical and psychiatric complications of alcoholism

carried out in acute emergency and hospital inpatient settings are covered as part of the basic health insurance coverage; new coverage is proposed to provide benefits for nonmedical treatment services targeted at the chronic alcohol dependence itself. The additional chronic phase services are viewed as "novel," requiring a period of testing before they can be accepted as a basic benefit throughout the industry. The testing has not yet been carried out. The benefit package is now being widely distributed in an effort to obtain shifts in coverage to meet current clinical practice.

Currently, a great deal of flux exists in the definition of the elements, settings, and phases required in a comprehensive alcoholism treatment system. The essence of this controversy was captured in a recent report summarizing the findings of a study of the long-term financial viability of NIAAA-funded projects (Newman et al. 1978). This report focused on the problems that NIAAA-funded treatment programs have had in establishing long-term, firm funding bases, partially because of the inability to establish the value of freestanding treatment of chronic alcohol dependence and the failure to resolve whether alcoholism treatment is a medical or social service responsibility.

Financing practices have not kept pace with clinical practices. Nonhospital, or social setting, detoxification for the middle or upper class alcoholic is not yet accepted for reimbursement by the major third-party reimbursers, including Medicaid and Medicare (Lewis 1980). Many upper and middle class persons who require detoxification and have third-party health insurance coverage tend to avoid the nonhospital detoxification programs because they are still associated with skid row and the public inebriate (Shulman and O'Connor 1979). Therefore, the Blue Cross package represents a breakthrough of sorts since it recognizes that funding mechanisms for alcoholism treatment must cover a broad enough spectrum of hospital and nonhospital services and service providers to insure that individual patients or clients are provided with a realistic continuum of care (Boche 1975). This state of affairs does not yet exist (Noble et al. 1979).

Given these limitations, a simple means to gauge the value of treatment is to look at what happens to persons after their treatment is completed. While this procedure does not have the validity of a controlled experiment, examination of these data can provide rough guidance for future development. Changes from intake to 180-day followup for NIAAA-funded projects in the major categories reporting on the monitoring system are displayed in table 2. It should be noted that the followup interview rate is fairly low and that persons lost to followup are those most likely to have deteriorated rather than improved (Moos and Bliss 1978). No correction for spontaneous remission has been made. This would mean that the actual improvement rate is probably less than displayed. Applying tests of significance would be inappropriate. Rather, these data are presented as indicators of trends. As was noted in the *Third Special Report on Alcohol and Health*, where data for only four categorical programs are presented, changes in the alcohol

Table 2. Changes in Alcohol Consumption, Impairment, and Social Function in NIAAA-Funded Programs, 1978

Program Type ¹	(N)	Drinking Behavior During Past 30 Days									
		Percent Abstaining		Average Ethanol Consumed Per Day in oz		Average Number of Drinking Days		Impairment Index		Average Number of Days Worked	
		Intake	Followup	Intake	Followup	Intake	Followup	Intake	Followup	Intake	Followup
Alcoholism treatment center	2,183	12	47	4.0	1.4	13	6	12.1	8.1	13	14
Problem drinking driver	1,257	8	46	2.2	0.6	12	5	7.1	3.8	16	17
Public inebriate	441	20	64	6.6	1.9	13	4	18.8	16.3	5	8
Poverty	2,634	18	55	4.5	1.6	13	6	15.4	11.4	11	13
Occupational	137	13	67	5.7	1.1	17	4	14.8	7.8	18	20
Cross-population	1,507	18	56	4.8	1.7	13	6	16.0	12.0	11	13
American Indian											
Alaskan Native	570	16	42	5.6	2.7	10	6	14.1	11.9	6	8
Criminal Justice	238	32	76	4.4	0.6	11	2	14.5	8.4	7	8
Women	295	31	73	3.7	0.5	11	3	17.9	12.6	7	10
Spanish	574	13	51	1.2	0.5	8	4	4.7	3.5	18	18
Black	258	13	42	6.9	2.0	17	8	13.7	8.9	8	11
										43	62

¹ Sample size varies slightly for each program type and for each variable reported on. Actual sample size is available in Ferguson and Kirk 1980.

² The Impairment Index is a multi-item scale that is completed at intake and followup. The index captures information about the occurrence of signs of behavioral impairment or physical dependence during the preceding 30 days; the higher the score, the greater the alcohol-related impairment.

consumption indexes are similar when initial intake level differences are taken into consideration. The data reflect the differences in severity of alcoholism at intake among the various categorical programs, e.g., the very low average consumption in Spanish programs as contrasted with public inebriates. Changes for all programs are in the direction of improvement, reinforcing the conclusion that alcoholism treatment does have value and that it is a wise investment.

The Value of Inpatient Primary Treatment

A continuing controversy is the setting or environment in which primary treatment and rehabilitation should take place (National Association of Private Psychiatric Hospitals 1979). Until a few years ago, the main method for treating alcoholism and drug dependence was long-term institutional care in hospitals away from the patient's home. Long-term hospitalization has been found ineffective in enabling the typical person to return to a productive role in the community (Baekeland 1977; Willems et al. 1973). Over the years, the planned length of stay in the hospital for intensive treatment has been reduced for the typical patient. The concept of aftercare, or continued outpatient treatment, has been added as a necessary component of effective treatment (Chavipil et al. 1978; Costello 1980; Glatt 1978; Vannicelli 1978). The modal treatment approach has become short-term intensive treatment in an inpatient or intermediate care setting followed by continuing treatment on an outpatient basis, with the patient returning home and resuming full social functioning, or on a residential basis in a halfway house with the patient continuing to receive treatment and environmental support. The optimal length of stay in a primary residential or inpatient treatment setting has not yet been determined. Schuckit's (1979b) advice after reviewing the literature was to keep hospitalization as brief as possible.

But there is still disagreement in the field about the need for any primary treatment of alcoholism in general or psychiatric hospital inpatient units. There are those who believe that the initial confinement in an authoritative medical setting is the best means to initiate treatment and is the most cost effective in the long run even though initial costs are higher because of the quality of care available (Comprehensive Care 1978; National Association of Private Psychiatric Hospitals 1979; Pisani 1977).

There are those who believe that treatment for and recovery from chronic alcohol or drug dependence, unless complicated by severe medical and/or psychiatric conditions, do not require hospitalization in a traditional inpatient unit, but may require a period of primary treatment in a residential setting, initially or periodically (Diesenhaus 1979). Primary residential treatment of alcoholism can take place in a medical unit within a general hospital, or in a psychiatric hospital, or in a special alcoholism hospital, or in a social rehabilitation unit in a residential setting. The methods are the same in all four settings. We are in a transitional period when public perception and insurance coverage have not yet caught up with the state of the art regarding the varieties of residential treatment needed and being provided. A major factor in

creating demand for alcoholism inpatient services in a general hospital is the community's and patient's positive perceptions of such a unit. A general hospital alcoholism rehabilitation ward will not have the stigma often associated with an alcohol program in a State mental hospital or with a publicly funded nonhospital detoxification or rehabilitation facility which will be seen as a public inebriate program (Pattison 1977, 1979). The general hospital alcoholism ward will be attractive to middle and upper income persons with health insurance covering only hospital treatment. There is still only spotty limited insurance coverage for intensive alcoholism residential treatment in nonhospital residential settings. For alcoholics, who still may be denying their problem, program attractiveness and availability of insurance coverage can be major variables in aiding retention in treatment (Shulman and O'Connor 1979).

An alcoholic can be admitted to a hospital alcoholism treatment setting for many different purposes—for example, detoxification and treatment of acute alcoholism states, diagnosis and treatment of alcohol-related physical problems (e.g., pancreatitis, cirrhosis), diagnosis and treatment of nonalcohol-related physical problems simultaneously with alcoholism rehabilitation, diagnosis and medical or surgical treatment of nonalcohol-related conditions in a person who would present a management problem on a regular ward, and treatment of a concurrent psychiatric disability, as well as alcoholism rehabilitation (Hore 1976; Schuckit 1979*a,b). The failure to distinguish the purpose for admission to a hospital program leads to inconsistent research results like those reported by Altman et al. (1978), who tried to develop indexes for predicting length of stay versus premature dropout for alcoholism inpatient treatment. Their sample of six units included three that admitted patients directly into their program and three that did not. They found that one group of rapid dropouts comprised those intoxicated clients admitted under duress, usually by the police. The resistant intoxicated admissions to the three inpatient units in this study most likely should not have been admitted to these facilities for primary treatment and their presence necessarily distorts the analysis of effectiveness (Pattison 1977, 1979). The treatment and rehabilitation of chronic alcoholism are clearly different from the treatment of acute alcoholism states (e.g., intoxication, simple withdrawal syndrome, delirium tremens, alcohol hallucinosis) and the myriad physical complications of chronic alcohol misuse. Studies must define clearly what the purpose of hospitalization was and whether it was accomplished.

Currently, no systematic means exist for differentiating which clients must go to a hospital setting, to a social rehabilitation setting, or to an outpatient setting for either detoxification or primary treatment. Because chronic alcohol dependence involves physical, psychological, and social causes and consequences in varying amounts for each client, it is necessary to establish at intake the extent of each of these factors and refer the person to the appropriate setting.

While many physicians, AA members, and local groups, such as some NCA chapters and companies with employee assistance programs, strongly support use of the general hospital for primary alcoholism treatment because of their appropriate desire to have a local program with geographic accessibility, quality treatment, a "medical" rather than "psychiatric" model of care, and availability of third-party coverage, a major theme of the recent literature is the failure to find that inpatient (whether hospital or intermediate) treatment is any more effective in treating heterogeneous groups of chronic alcoholics than is outpatient treatment. The wisdom of continuing to invest in these types of expensive hospital and residential facilities has been raised by a number of researchers (Armor and Braiker 1980; Armor et al. 1976; Emrick 1979; Polich et al. 1980; Schuckit 1979b). Yet, there has been an increase of short-term units in general hospitals which are finding them attractive sources of revenue as declining admissions create extra beds and mounting overhead costs (Dipaolo 1978). These units typically provide an initial detoxification and/or evaluation period, with close monitoring of the intoxicated patient in a special area until the patient is medically stable enough to begin rehabilitation (1 to 2 days or up to 5 days) followed by a 3-to-4-week inpatient stay for primary treatment, including activities such as lectures, films, discussion groups, group therapy, biofeedback, or assertiveness training. Evaluation of medical status is stressed and chemotherapy frequently used. Treatment of medical complications typically takes place on a medical-surgical ward with transfer back to the alcoholism unit when the patient is able to participate in the ambulatory program. Aftercare is typically a once a month group meeting or an alumni group. Similar programs are operated in many VA and military hospitals.

These inpatient facilities tend to admit alcoholics who are married, employed, and socially stable and who have experienced fewer years of heavy drinking—all characteristics associated with good prognosis. Thus, there is a paradox in that those alcoholics with the best prognoses are more likely to be admitted to the most intensive and expensive treatment settings for primary treatment because third-party coverage is readily available for these inpatient settings but not for intermediate level primary treatment units. Some insurance companies (e.g., Kemper) do reimburse intermediate and outpatient primary rehabilitation; however, the major carriers such as Medicaid, Champus, and most Blue Cross plans do not uniformly do so (Berman and Klein 1977; Comptroller General 1977; Newman et al. 1978).

Baekeland (1977), in his comprehensive review of the evaluation of treatment methods used with chronic alcoholism, summarized the current state of the art as it applies to inpatient treatment:

- Higher socioeconomic status (SES) patients require shorter hospitalizations because they are subject to more favorable extramedical posthospital influences, while low SES patients need longer stays in order to strengthen their ability to deal with more difficult life situations.

- Inpatient treatment of alcoholics is ineffective unless it is supplemented by followup outpatient treatment after discharge from the hospital.
- Followup outpatient treatment and provision of social supports are more important for the lower class patient with poor social resources than for the more socially competent upper class patient. Higher SES patients require shorter hospitalization and less aftercare.
- Current inpatient programs (60 to 90 days) may be too long and can be replaced by shorter inpatient stays followed by outpatient treatment.
- The research evidence does not support the idea that prolonged inpatient treatment offers any special advantage for most patients.
- Patients who do well on drugs, in psychotherapy, or in rehabilitation programs seem to have different characteristics and success rates go up with the number of treatment options given the patient.

Baekeland concluded that about 30 to 42 percent of patients improved with hospitalization and that the rate of improvement was related to both patient characteristics and intensity of treatment methods. Social stability has repeatedly been found to be positively related to good outcome. Improvement rates vary from 32 to 68 percent for good prognosis patients (higher socioeconomic status and social stability) and vary from 8 to 18 percent for poor prognosis patients (largely skid row alcoholics). More intensive inpatient treatment methods were related to gain in treatment effectiveness; more recent studies described below have called this conclusion into question.

Emrick (1979) reviewed four studies that randomly assigned patients to inpatient versus outpatient treatment and concluded that little is known about the relative effectiveness of these two settings. He also distinguished between "socially deteriorated alcoholics" and "socially intact alcoholics" and found while inpatient treatment yielded better medical attention for socially deteriorated alcoholics, there was no evidence that inpatient primary treatment was superior to outpatient treatment in dealing with the chronic alcohol dependence syndrome on any of a variety of outcome dimensions. For socially intact alcoholics, he found the evidence regarding the comparative effectiveness of inpatient and outpatient treatment to be inconsistent.

In a more recent study, Stinson et al. (1979) compared patients randomly assigned over a 3-year period to one of two 30-bed inpatient programs located in the same hospital and found that hospital care plays only a limited role in the treatment of alcoholics. The authors agreed with Edwards et al. (1977) that more intensive treatment regimens should be instituted only when less costly approaches fail to bring about results because simpler, less costly inpatient treatment approaches are as effective as, and more cost efficient than, more intensive and expensive hospital programs. As a result of this study, the

hospital closed its 60-bed inpatient unit and transferred funds to less expensive outpatient and halfway house services (Information and Feature Service 1979).

Armor et al. (1976) also attempted to measure the impact of treatment inputs such as setting (inpatient, intermediate care, outpatient), process (individual and group therapy and counseling, drug treatment), amount (amount of services, length, pattern), therapist characteristics, and facility characteristics. They found that there was no relation between treatment setting and remission (drinking status) at 6-month or 12-month followup, even when data were adjusted for severity of symptoms, social stability, and socioeconomic status. Client inputs (definite alcoholism symptoms at intake and social stability) were the strongest predictors of treatment outcome. Among treatment inputs, amount of service was a stronger predictor than either setting category or duration in days. Similar findings were obtained at 4-year followup (Polich et al. 1980). Extended outpatient care alone or as followup to inpatient care was more clearly related to success at 4-year followup than extended inpatient care. The researchers suggested that treatment in inpatient settings should be examined for cost effectiveness; they pointed out that inpatient care, although apparently not more successful than extended outpatient care in producing long-term effects, may be required in some cases because of the alcoholic's physical condition and may produce beneficial short-term effects.

Bromet et al. (1977) compared demographic characteristics (age, sex, social class, residential stability, etc.), drinking severity (quantity consumed, frequency of binges, physical concomitants, etc.), and current psychological functions (self-ratings of mood and problems) with treatment experiences received in inpatient settings. They found no systematic relationship between any of the patient characteristics measured and the type of treatment interventions experienced or with length of stay in the facility. They concluded that inpatient and residential treatment programs did not appear to provide differential treatment assignments based on patient characteristics.

Page and Schaub (1979) reviewed seven earlier studies relating outcome to the length of inpatient stay for alcoholism treatment prior to conducting their own study of the value of lengthening their 3-week inpatient program to 5 weeks; they concluded that the published followup data did not support the need for a longer inpatient stay. Their own study found similar results, leading them to conclude that the term "orientation program" would be a more appropriate label for "inpatient treatment" programs. The term would suggest the more accurate modest goals of orientation and education during a short inpatient stay with referral to ongoing outpatient therapy. They concluded that short-term inpatient treatment is unnecessary for the majority of alcoholics, while perhaps a short inpatient orientation is necessary for a small portion, who should be assigned on a "scientific" rather than a self-referral basis (Pattison 1979). Page and Schaub suggested that the inpatient phase of treatment cannot be expected to complete the

required alteration of pathological lifestyle and should be followed by a well-structured outpatient program which will complete the sustained and intensive effort needed for bringing about change.

Perhaps a new, more limited function needs to be developed for inpatient alcoholism rehabilitation units where they serve as acute phase settings for treatment of medical consequences and complications and as chronic phase settings only for orientation or for primary treatment of alcoholics who have failed in other settings (Hore 1976; Schuckit 1979b). For the majority of alcoholics, recovery from alcoholism does not seem to require hospitalization for primary treatment in a traditional inpatient unit (Glatt 1978); recovery may require admission to a limited or specialized hospital or residential setting initially or periodically for clearly defined subgroups. Development of the definitions needed for identifying those subgroups is the next major research task required, so that expensive hospitalization for primary alcoholism treatment will not continue to be used indiscriminately and inappropriately. It should be noted that the outcome studies reviewed here vary in their methodological sophistication and adequacy and in the subpopulations studied. The trends reported on must be seen as suggestive only and policy decisions concerning the fate of any treatment setting or modality should be reserved until adequately designed studies are carried out.

Social Model Versus Medical Model Detoxification

Just as there has been increasing recognition of the need to question the traditional response of admitting all alcoholics to an inpatient setting for primary treatment and rehabilitation, there has been increasing questioning of the need to continue the wide variety of activities which have been carried out in the hospital under the rubric of detoxification. Nonhospital detoxification was rushed into service as a major—and sometimes only—contributor to the decriminalization of public intoxication without there having been a carefully developed strategy for testing and implementing alternatives. Part of the push was an ideological and territorial conflict; for some, the creation of nonhospital, nonmedical detoxification alternatives represented a rejection of the psychiatric and medical dominance in the alcoholism treatment field. These ideologies saw nonhospital detoxification programs as an alternative both to the drunk tank where alcoholics had been treated as “morally reprehensible criminals” and to the hospital where alcoholics had been asked to take a “passive patient role” and not participate fully in their own recovery while being “accused” of having underlying problems which caused their excessive drinking. Nonhospital detoxification programs were started most often by recovered alcoholics who saw hospitals as perpetuating alcohol dependence through prescription of cross-addicting sedatives and tranquilizers. Like most ideological battles, there has been stereotyping of the opponent’s position and a lack of dialogue.

Recent studies of the Ontario detoxification system (Annis 1979; Smart 1977) have raised questions about its effectiveness in involving clients in long-term rehabilitation: Have the detoxes become new revolving doors? Limitations on the resources available in the Ontario system (too few detox beds to accept all police referrals, partial decriminalization) make it difficult to generalize to other locales. However, it is important to note that expectations of success with the new detoxification programs may have been overly optimistic. Reiff-Ross and Adams (1977) questioned the value of the revolving door concept as applied to detoxification programs as "a pessimistic notion which fosters negative beliefs and unfavorable expectations about the results of treatment for [all alcoholics]" (p. 7). They suggested that there is a subgroup of chronic alcoholics who show patterns of recurrent persistent readmissions over extended periods of time. The "revolving door syndrome alcoholic" constitutes a special population for which additional or novel treatment is required. Readmissions can occur for a variety of reasons, including treatment progress (Kirk 1977; Kirk and Masi 1978; Solomon and Doll 1979).

Social setting detoxification was introduced originally to provide an alternative to jail or hospitalization for the public inebriate. It is ironic that it has become overidentified with this physically debilitated population for whom it may be least appropriate. The incidence of physical complications or severe withdrawal is likely to be less in a more socially stable, physically healthy group of alcoholics (Ballenger and Post 1978). There has been little, if any, acceptable experimental comparison between the nonmedical social model and the medical model of providing detoxification services. Most evidence to date has involved clinical experience and trials without direct comparison of contrast and control groups within the context of a rigorous experimental design and randomization.

As a result of these clinical reports, a number of States have moved to implement the Uniform Act by creating systems of nonhospital social setting detoxification centers as alternatives to both jail and hospitals (e.g., Colorado, Idaho, South Carolina, California, Illinois). Other States have developed nonhospital medical model detoxification centers (Florida, Massachusetts). Still others are reluctant to initiate nonhospital units because there is no national standard or agreement on their value and acceptability as alternatives to hospital detoxification for other than the public inebriate (Gunnerson and Feldman 1978). Perhaps, by understanding that the social setting detoxification center can be the medical treatment of choice for a person experiencing a mild or moderate level of intoxication and withdrawal (Ballenger and Post 1978; Hore and Russell 1979; Pattison 1979), States and communities will be able to develop a coherent system of identification, triage, and referral so that the multiple aims of cost savings, safe withdrawal, avoidance or treatment of physical complications, and motivation for continued treatment can be met (Edwards 1977).

The competition between the medical and social models of treatment is, perhaps, the most active at this time since this controversy has moved from the clinical laboratory and the conference table to the halls of Congress where the question being addressed is which type of treatment—hospital-based or free-standing detoxification and primary treatment—will be reimbursed by third-party payers (Lewis 1980). This disjunctiveness in funding mechanisms for alcoholism services in the public and in the private sectors has been brought into sharp focus by the recently initiated certificate of need process where questions are raised about the cost effectiveness of detoxification and primary treatment in different settings. Research findings do not support the current emphasis on hospital detoxification.

The function of detoxification programs in today's network of alcoholism treatment services is twofold—first, to help the inebriate withdraw safely from alcohol and, second, to initiate evaluation and referral to ongoing treatment for chronic alcohol dependence. Detoxification is management of the acute reaction to excessive alcohol use. As Hore (1977) noted, the management of intoxication and the alcohol withdrawal syndrome involves two major aims—the control of disruptive behavior and the avoidance of possible complications. Other activities which can take place during this period, often taking advantage of the crisis precipitated by the intoxication, are designed to initiate rehabilitation and recovery (Annis 1979; Smart 1977). Hospital-based medical detoxification emphasizes the use of drugs to attain these objectives; nonhospital, social setting detoxification emphasizes creation of a supportive social climate to attain the same objectives. Nonhospital detoxification advocates assume that only 3 to 5 percent of the intoxicated persons admitted for care require immediate medical attention of the sort routinely provided in hospital detoxification settings (O'Briant et al. 1976; Smith 1980). These assumptions are based on the original clinical trials done in Ontario and San Francisco (O'Briant 1975; Smart 1977) and on accumulated experiences with State systems developed over the last 6 to 8 years (Smith 1980).

Researchers have recently suggested that ambulatory detoxification can be effective with certain types of intoxicated persons (Feldman et al. 1975; Kolodner 1977; Pattison 1979; Tennant 1979). Ambulatory chemical detoxification is offered as an alternative to hospital detoxification for the middle class alcoholic who is unlikely to seek help at the public nonhospital alternatives (Kolodner 1977). Recognizing that the common private medical response will be to prescribe a minor tranquilizer or sedative and to tell the alcoholic to stop drinking, Kolodner advocated an intensive ambulatory or day care procedure during which the patient returns daily for five or six visits to receive medication and counseling. Medication to be taken at bedtime and the next morning is supplied; the use of medication is tapered off by gradually reducing bedtime doses. Prescriptions are not written; all pills are dispensed as necessary. Family and friends are encouraged to participate in the process through remaining with the person during the

initial observation period and the subsequent treatment. Ambulatory chemical detoxification is not yet accepted by physicians as a standard procedure (Schuckit 1979a).

In order to understand the current controversy over hospital versus nonhospital detoxification, it can be very helpful if a distinction is made between models of treatment without fully relating those models to the usual concepts of the nature of alcoholism and its etiology with which treatment strategies are customarily associated (Armor et al. 1976; O'Briant et al. 1973; Pattison et al. 1977). Practitioners often utilize treatment methods stemming from a given model without adhering to all elements of the model or by simply attempting to incorporate elements into their own more complex model.

Three major classes of alcoholism treatment models can be identified—the physiological, the psychological, and the sociocultural. Physiological treatment strategies focus on the person as the unit of treatment and use pharmacotherapy to produce change in the alcoholic. Psychological treatment strategies also focus on the person and use psychotherapy or behavior therapy to produce change in the alcoholic. Sociocultural treatment strategies focus on both the person and his or her social and physical environment as the units of treatment and use a variety of techniques, including environmental structuring, to provide new social relationships for the alcoholic.

The key to determining which model underlies a given treatment program is to identify the treatment method that is stressed (as was done by Welte et al. 1977 and Stinson et al. 1979). Detoxification programs generally reflect a physiological or a sociocultural approach. Adherents of the physiological model utilize intravenous fluids and medications (e.g., chloriazepozide, diazepam) in managing withdrawal; adherents of the sociocultural model utilize a supportive environment and personal contact to manage withdrawal. Adherents of the physiological model use tranquilizers, antidepressants, lithium, or disulfiram to treat chronic alcohol dependence. Adherents of the sociocultural model strive to change the interpersonal networks to which the person belongs. Both groups use common techniques such as education about the effects of alcohol, group discussion, and individual counseling, but the stress is on either chemical management or social reconstruction (O'Briant et al. 1973).

Hospital detoxification is associated with the physiological, or medical, model. Nonhospital detoxification is identified most often with the sociocultural model, but this is not always the case. Sociocultural model, or social setting, detoxification is nonmedical detoxification in the sense that chemotherapy is not used, although evaluation for physical problems is carried out with referral to outpatient medical evaluation or hospital treatment when necessary (O'Briant 1975; Whitfield et al. 1978). Nonhospital detoxification can be medical detoxification where the setting may be intermediate care; the staff comprises primarily RNs or LPNs, and chemotherapy is used to manage withdrawal (Benforado et al. 1978).

The term nonmedical detoxification is misleading when applied to social setting detoxification and contributes to continuing ideological controversy rather than to problem resolution. The more appropriate term would be nonchemical detoxification. Supporters of the social setting model for detoxification are not denying that excessive use of alcohol can create physiological imbalances; they are asserting that in mild or moderate instances of intoxication and of the alcohol withdrawal syndrome a nonhospital supportive environment is more appropriate management than chemical assistance (O'Briant et al. 1973). They would not deny that in instances of severe or complicated withdrawal, medication and other medical interventions are necessary and that the first step in any detoxification procedure is careful evaluation by trained personnel of the potential for a severe withdrawal reaction or other physical complication so that appropriate referral can be made (Smith 1980).

Hospital detoxification is best relabeled "chemical detoxification" because the primary differentiating factor is the use of psychoactive and other drugs in the management of withdrawal. As previously noted, chemical detoxification can take place in a nonhospital setting (e.g., ambulatory detoxification) as well as a hospital environment. Thus, the key to resolving the controversy between the social model and medical model advocates is to understand that detoxification is clearly a medical procedure, but one that does not always need the type of medical intervention or hospitalization that often overemphasizes pharmacological management and deemphasizes psychosocial approaches (Wesson and Smith 1977).

It is difficult to estimate how many inebriates in a community will need hospital, ambulatory chemical, or social setting detoxification. Current estimates of the need for hospital detoxification are based on the experiences of nonhospital detoxes referring back to hospitals (3 to 5 percent) or of hospital units (40 to 60 percent). Studies are needed in which the level of severity and potential complications are predicted and then assessed for accuracy. In one such study, Ballenger and Post (1978) found that 91 percent of admissions to a naval hospital alcoholism rehabilitation unit experienced only mild or moderate withdrawal. Severity of withdrawal was related to years of heavy abusive drinking, although even among subjects with more than 6 years' history, less than 15 percent experienced delirium tremens or seizures. Hore and Rossall (1979) reported that only 54 percent of the first 100 skid row alcoholic admissions to a detox ward were rated as showing withdrawal symptoms during their stay on the unit. The use of alcohol withdrawal rating scales, as done in these studies, to determine severity could more clearly aid in differentiating the setting and method required for detoxification and aid in determining the number of beds needed for each type.

Given such a distribution of levels of severity, there does not seem to be a need for as many hospital detoxification wards. With available empirical data, the issue would not continue to be an ideological

dispute, but rather would be resolved by clinically determining which cases can be safely handled in a nonhospital social model setting, which cases require hospitalization and chemical assistance, and which cases require nonhospital chemical assistance. There appears to be a need for each service in a given community. This approach will require changes in financing mechanisms and attitudes because nonhospital social setting detoxification is not consistently seen as medical treatment (Newman et al. 1978).

Abstinence Versus Nonproblem Drinking

The debate continues over the value of abstinence as the only goal of treatment for chronic alcoholism. This debate over the goal of alcoholism treatment actually reflects a debate over different conceptions of etiology, course, and model of alcoholism. Advocates of the abstinence goal are identified most often with the belief in a biochemical cause, a simplified medical model, and, most important, an irreversible course if drinking continues. Advocates of a controlled drinking goal are identified most often with the belief in a learned cause, a social learning model, and a reversible course even when drinking is continued (Pattison et al. 1977). Empirical data have been presented regarding abstinence versus controlled nonproblem drinking as the goal of treatment. Both sides are claiming support for their positions from these data. The controversy is, happily, beginning to move from denouncements in the public media to the quiet reflection and study of the clinical laboratory and conference table. The clamor that greeted the first Rand report (Armor et al. 1977) was not repeated with the publication of the second and its more temperate conclusions, since the initial findings did not hold up over the longer 4-year followup (Polich et al. 1980). As Roizen (1977) pointed out, the initial conclusions were seen by many as contrary to the classical disease model of alcoholism.

The classical model leads to a treatment ideology that stresses the need for alcoholics to accept that they have a constitutional difference that makes it impossible for them to ever drink alcohol again. In this model, treatment consists of educating alcoholics about the effects of alcohol and persuading them to make a lifelong commitment to abstinence. Seen as stemming from the work of Jellinek and the beliefs of AA, this classical model has had much utilitarian value and has been the means by which alcoholism has been accepted as a disease requiring treatment rather than a moral flaw requiring punishment.

The ongoing debate has also brought forth challenges to the value of the traditional Alcoholics Anonymous model of alcoholism (Pattison et al. 1977; Tournier 1979a). These challenges have focused on AA's role in the controversy over abstinence versus controlled or nonproblem drinking as the goal of alcoholism treatment. Tournier (1979b) saw his challenge as arising from his concern that the dogmatic adherence to the AA ideology blocks the necessary empirical studies and review of assumptions needed for developing an expanded, more heuristic model

of alcoholism. Leach and Norris (1977), however, emphasized that abstinence is not the only indicator of success for AA—rather abstinence is only a starting point for the full recovery in all life areas that is the AA ideal. Leach and Norris stressed that the AA model of recovery, in line with other efforts to define the goal of alcoholism treatment, includes becoming less egocentric, more caring and concerned for others, and better adjusted in work and family relationships. They reviewed a variety of studies to show that AA involvement is positively related to variables such as legal status, self-acceptance and self-understanding, job performance, and ability to handle special situations as well as maintaining sobriety.

Although the ideological debate about the value of the abstinence goal versus controlled drinking goals continues, research is being conducted to try to identify the differential characteristics of those persons for whom a return to nonproblem drinking is a viable goal (Alterman et al. 1978; Horn 1978; Miller and Caddy 1977; Miller and Joyce 1979; Polich et al. 1980; Pattison 1976, 1979; Pattison et al. 1977; Sobell and Sobell 1978). Acceptance of the premise that some alcoholics can return to nonproblem drinking is found in articles describing clinical procedures (Fischer 1978; Knauert 1979) indicating that to some extent the debate has been resolved pragmatically for some practitioners, who now include both goals as part of their treatment philosophy. The extent to which this reflects an actual change in behavior or more openness about prior practices is open to question (Hingson et al. 1977).

Knauert (1979) exemplified the practitioner who has attempted to integrate the abstinence versus controlled drinking goal controversy by differentiating which type of alcoholic can resume social drinking and by expressing the conservative position:

Only reactive or secondary alcoholics can be retrained to be social drinkers. If a primary alcoholic attempts social drinking, he or she will reestablish the pathological relationship with alcohol and treatment failure may result. Resuming drinking is a risky business for the primary alcoholic. It is also risky for reactive alcoholics (they may drink to cope with stress thus avoiding the problem) and for secondary alcoholics (they may stop taking needed medications since drinking often hides underlying symptoms). To be safe, counselors should advise all alcoholics regardless of category to abstain from alcohol. (p. 8)

Fischer (1978) suggested that there are two types of adolescent problem drinkers, the early and the advanced, for whom different treatment goals are appropriate. The early alcohol abuser is characterized by a short history of heavy drinking (not more than 1 or 2 years), preceded by a previous history of nonabusive drinking, drinking in direct response to a particular emotional problem or crisis or peer group demands, general absence of symptoms indicating physiological dependence, and only a mild-to-moderate amount of alcohol-related behavioral problems (deterioration in school or work functioning, family

arguments, etc.). For the early abuser, a treatment goal of return to moderate drinking can be appropriate if treatment also involves help in dealing more effectively with environmental pressures. The advanced adolescent drinker can be characterized by a prolonged history of heavy drinking, a pervasive pattern of drinking not related to stressful situations, signs of physical dependence and loss of control, and marked alcohol-related behavioral problems. For the advanced abuser who has already demonstrated an inability to drink moderately, Fischer holds that a treatment goal of abstinence is necessary. Occasionally, as a tactical consideration, an advanced abuser who is not ready to accept abstinence as the treatment goal can be allowed to experiment with controlled drinking with the understanding that relapse will lead to identifying abstinence as the treatment goal.

Sobell and Sobell (1978) took the position that it has already been scientifically proven that some alcoholics are capable of resuming drinking in a nonproblem manner and that the future research questions must focus on "determining for whom such alternatives are possible and what methods are the most effective for attaining those outcomes" (p. 23). Their method, which is based on operant learning theory, involves a redefinition of the goal of treatment from the traditional goal of abstinence to the reduction of drinking problems. They suggest that the ideal goal is no drinking problems, rather than no drinking. Their method employs a number of components including the availability of alcohol as part of the treatment program so that clients can be directly taught to drink like nonproblem drinkers.

A major reason for some practitioners and researchers having rejected abstinence as the sole criterion of success in alcoholism treatment appears to be its infrequency in followup (Costello et al. 1980; Edwards 1977). Clinicians want more flexibility than the abstinence goal allows (Clare 1977). Many clinicians and researchers wish not to ignore those persons who have a relapse or continue to drink once active treatment is ended; instead they seek to identify which factors promote continued adjustment in persons without treatment even while they continue to experience alcohol-related problems and which factors are associated with relapse (Polich et al. 1980). While treatment evaluation studies still tend to focus on measures of drinking behavior as the primary outcome indicator, most report on a variety of other indicators reflecting acceptance of a multidimensional model of alcoholism recovery (Costello 1980; Cronkite and Moos 1978; Horn 1978). Efforts are made to understand the patterning of consequence among these indexes.

Abstinence rates at followup vary as a function of program adequacy and population characteristics—rates for socially disadvantaged groups treated in public programs are likely to be less than those more socially stable groups treated in private programs.

Experimentation continues to determine whether nonproblem drinking is a legitimate goal of treatment for selected varieties of alcoholism, using as a framework what has been called the "emergent model of

alcohol dependence" (Pattison et al. 1977). However, even for behavior theorists identified with the controlled drinking goal, the predominant theme remains that abstinence is the goal of choice at the current time with current knowledge (Nathan and Lipscomb 1979).

Varieties of Alcoholics and Varieties of Alcoholism

A major theme found in the recent literature has been the increasing acceptance that alcoholism is a multivariant syndrome with numerous variations, each with its own course and required treatment response (e.g., Hart and Stueland 1979a,b; Horn 1978; Kissin 1977a; National Association of Psychiatric Hospitals 1979; Pattison 1979; Wanberg et al. 1977). The emerging acceptance of the multiple syndrome model of alcoholism leads to greater diversity in acceptable treatments and a breaking free from dogmatic adherence to a single course of treatment and a single goal. The controversy over whether the unitary phase model of alcoholism was sufficient to describe the natural course for all alcoholics has been supplanted by a large number of vastly differing typologies. Increasingly, there is the operation as if, if not actual consensus that, chronic alcohol dependence consists of a variety of syndromes. There is, however, no unified set of dimensions by which various practitioners classify the different types of problem drinkers and alcoholics with whom they work. This lack of consensus can impede better programing. The distinction between problem drinking and alcoholism itself represents a commonly used, but not universally accepted, typology where alcoholism is identified with physical dependence and the disease model and problem drinking is identified with alcohol-related problems in living and the sociocultural model (Horn 1978; Pattison et al. 1977). The distinction relates to the severity and intensity of intervention required; the distinction is not uniformly applied, however.

Some of the typologies encountered have been developed through clinical experiences (Fischer 1977; Knauert 1979); others, through rigorous mathematical analyses of test and observational data (Hart and Stueland 1979a,b; Horn 1978); and others, as a derivative of theoretical models applied to clinical and research data (Kissin 1977a; Schuckit 1978, 1979a,b). Pattison (1974, 1979) discussed the various population characteristics that can be used to classify clients and to develop appropriate treatment interventions (e.g., sex, age, ethnicity, social class, and personal definition of alcoholism).

Although the acceptance of the concept that there are many varieties of alcoholism is beginning to appear in the literature, that acceptance may not be translated into general action very rapidly. Bromet et al. (1977) found no systematic relationship between patient characteristics and length of stay or kind of treatment experiences which patients received in five different primary residential treatment programs. Patients with different sociodemographic characteristics (e.g., age, sex, social class, race), different levels of drinking problem severity, and

different levels of psychological disruption (e.g., anxiety, depression) did not receive differential treatment. That is, each facility employed a standard treatment regimen which differed from that of the other four, and each facility saw alcoholics varying in sociodemographic characteristics, drinking severity, and psychological functioning, but the treatment regimens experienced by individual patients at a given facility did not vary as a function of their different personal characteristics. This finding is consistent with Pattison's (1973, 1979) analyses that treatment at a given program reflects a unitary philosophy and method but disagrees with his contention that there is a self-selection into that facility of those most likely to benefit from that unitary method. The findings again suggest that the failure to find successful outcome related to the amount of treatment received is in part a result of a heterogeneous group of clients receiving a homogeneous treatment experience; as Bromet et al. (1977) phrased it: "The consensus that therapy should be tailored to patients' needs has clearly been aired more in principle than in practice. . . . It is important that staff interventions be adapted to individual patient needs" (p. 957).

A major factor that may need to underpin any future schema of typologies and treatment plans is the possibility of an inherited, as well as a learned variety of alcoholism. Goodwin (1979a) concluded that the evidence supporting a nonexperiential, genetic factor in alcoholism is sufficiently strong to suggest that alcoholism be separated into two types—familial and nonfamilial—and that studies are needed to determine whether there are differences among the two groups on biological and psychosocial characteristics. It becomes important, also, to study whether there are differences among familial and nonfamilial alcoholics in response to various specific treatment interventions. Family history of alcoholism has rarely been used as a control in treatment evaluation studies. The evidence for a familial variety of alcoholism, with early age of onset, rapid development, and fulminating course necessitating early treatment at a young age, has two critical implications for treatment program design—first, the identification of children of alcoholics seen in treatment as a high-risk group requiring observation, alcohol education, and supportive counseling, and, second, careful history taking to determine the extent of alcoholism in parents and other blood relatives.

Other typologies may be particularly valuable for designing new treatment programs and dealing with the controversy regarding the relevance of psychiatric treatment. The twofold typology of alcoholism advocated by Schuckit (1973, 1979a,b) may be useful in describing the differential success of free-standing alcoholism units and psychiatric or medical alcoholism units. Primary alcoholics are those who begin their problem drinking with no history of any preexisting major psychiatric disorder; they manifest a history of heavy drinking, signs of psychological dependence on alcohol, possibly signs of physical dependence, and occurrence of significant alcohol-related life problems. Secondary alcoholics are those who become alcohol abusers only after a history of another major psychiatric disorder. Schuckit identified the two most

frequently appearing variations of secondary alcoholism as sociopathic alcoholism and depressive alcoholism. He specified differential treatments for each type.

Freestanding alcoholism units, staffed by "two hatters," may be more comfortable and more effective working with the primary alcoholic client than with the primary affective disorder/secondary alcoholic client. The primary sociopathic personality/secondary alcoholic may not be treatable in a freestanding alcoholism treatment program but may require institutional treatment. The primary affective disorder/secondary alcoholic probably may fare better in a psychiatric setting where psychotropic medication (e.g., antidepressants, lithium) could also be utilized.

Kissin (1977a) also produced a typology which has not been used widely, but appears extremely helpful in designing treatment programs as well as in treatment planning for the individual alcoholic. Kissin's typology is an attempt to refine Jellinek's (1960) original work and deserves wider dissemination and use. The typology is based on three dimensions: (1) degree of physical dependence, (2) degree of psychological disruption, and (3) degree of social maladjustment or socioeconomic disruption. For example, the neurotic alcoholic who drinks only situationally (Jellinek's *alpha* alcoholic) would be characterized as high on psychological problems, low on physical dependence, and low on social maladjustment; the treatment of choice would be supportive and directive outpatient psychotherapy. Because of the many findings that social stability is positively related to the outcome of treatment, this third dimension represents an important factor to consider in designing programs. Orford and Edwards (1977) also suggested that there may be clinical significance in using diagnosis of Jellinek's type *alpha* (psychological dependence only) and type *gamma* (physical dependence with loss of control) to differentiate between those patients who can return to nonproblem drinking and those who cannot. *Alpha* alcoholics are thought to be potentially able to exercise control to limit their drinking, either spontaneously or with treatment, while *gamma* alcoholics cannot. The difficulty in establishing this differentiation for the many borderline cases requires development of more objective and reliable procedures for discriminating the two types. These researchers saw the critical differentiating factor to be the individual's degree of physical dependence on alcohol as manifested by withdrawal symptoms.

One system for describing varieties of problem drinkers and alcoholics which has current heuristic value involves defining special populations—groups that have a common social, psychological, or legal characteristic and that have encountered barriers in obtaining appropriate treatment. These special population groups are thought to need a specific set of outreach and treatment interventions if they are to be induced to seek early treatment, to remain in treatment, and to be treated effectively. An increasing number of researchers have tried to describe the relevant social, psychological, physical, and drinking

pattern characteristics of each of these special populations and to tie these characteristics to more effective clinical practices.

Differential treatment for different varieties of alcoholism has been accepted at a conceptual level more than it has been put into practice. Many practitioners and researchers are putting forth their own classification schemes and experientially derived "best methods" of treatment. Clinical trials and experimental studies of some of these methods are now being undertaken. It is premature to reach conclusions about the value of each of these typologies and treatments, but there is a need to begin to develop a unifying conceptual framework which can be used in treatment design and evaluation. No effort has been made to contrast or synthesize the various classification systems in this paper; however, such a synthesis or cataloging appears to be a necessary next step if the typologies are to become useful in designing treatment programs. Their value remains to be proven empirically.

Treating Alcoholics and Drug Abusers in the Same Program

Current research is trying to determine whether alcoholics and drug abusers can be treated in the same facilities with the same methods. In an attempt to move the issue from an ideological controversy to an empirical question, several special federally funded studies have been undertaken. Analyses of these studies are not yet complete. Yet, many States, which have now combined the administration of their alcohol and drug abuse authorities, are beginning to fund joint programs (Diesenhaus 1979). Resistance to combined treatment comes most often from treatment personnel in the alcoholism field; administrators in the alcoholism field and all types of personnel in the drug abuse field respond more positively to the notion of combined treatment.

While the controversy about combined treatment of alcoholics and drug abusers smolders, combined treatment is already taking place, most often in programs categorically funded as drug abuse treatment centers. Combined treatment of alcoholics and drug abusers, therefore, represents a reality that must be dealt with in the near future (Greene 1979). Combined treatment is most often taking place in programs that treat youthful drug abusers, in methadone maintenance programs, and in a growing number of clearly designated combined treatment facilities (Cole and Cole 1977). These clinics are most likely to be privately, rather than federally, funded (Greene 1979).

A major reason for the recent controversy over developing combined treatment had been the growing concern about alcohol abuse by heroin addicts in methadone treatment (Barr and Cohen 1979; Behari 1974; Belenko 1979; Ginzburg 1977; Green et al. 1978; Kaufman 1976). For example, Barr and Cohen (1979) reported that 28 percent of drug abusers in treatment at a combined alcohol-drug therapeutic community and 23 percent of opiate abusers in treatment at 10 methadone maintenance programs were identified as problem drinkers. Most of the problem-drinking addicts had had an alcohol problem prior to entering

treatment, so the excessive drinking was not always subsequent to going on methadone maintenance. These problem-drinking drug addicts had more pathological early histories and more deviant adult behavior and personalities than the non-problem-drinking drug addicts and the alcoholics in the study. They also were more likely to have poor treatment outcome. After a period of initial overreaction when methadone programs were largely unsuccessful in dealing with the problem-drinking addict, these programs have now developed the expertise to treat the 20-30 percent of their clinic caseload that requires combined treatment (Belenko 1979; Kamback 1979; Liebson et al. 1978).

However, it is not only drug abuse treatment programs that are seeing multiple drug abusers and must respond (Tuchfeld et al. 1975). In one study, over 18 percent of men arrested for driving under the influence of alcohol and referred for educational classes or alcoholism treatment were found to be multiple drug users. Those men arrested with blood alcohol concentrations of 0.15 percent and above were more likely to be multiple drug users, with barbiturates and tranquilizers most frequently used (Scoles and Fine 1979). Multiple drug use among first admissions to a State hospital alcoholism treatment program increased from 18 percent to 59 percent over a 7-year period (Wackwitz and Foster 1977).

Many existing combined treatment programs seem to have evolved naturally in communities where awareness of drug problems emerged later than awareness of alcohol problems. In these communities, well-established alcohol treatment programs with the ability to expand added a drug treatment capability (Cole and Cole 1978; Ottenberg 1977). The Veterans Administration established a pilot combined treatment project with 10 units in 1974 (Baker et al. 1978); these units continue, gradually modifying their treatment to be better able to incorporate the needs of both alcohol and drug abusers into a unified treatment approach (Lantinga et al. 1978).

In 1974, NIAAA and the National Institute on Drug Abuse (NIDA) collaborated to fund 10 projects to study the similarities, differences, overlaps, and relationships in the abuse of alcohol and the abuse of other drugs and also the feasibility of combined alcohol-drug abuse treatment (Carroll 1977). The projects in the National Drug-Alcohol Collaborative Project (NDACP) ranged from an inner-city methadone maintenance treatment program to a university research clinic studying the relation between acculturation and substance use in a Cuban emigre population; it also included projects serving primarily adults and those serving adolescents. Eagleville Hospital and Rehabilitation Center, which was a pioneer in combined treatment, managed the NDACP. The term *multiple substance abuser* was introduced to describe the person who manifested a pattern of abuse of more than one type of drug, including alcohol, from among 14 different categories. Although it must be recognized that these were selected projects limiting the generalizability of their results, over 80 percent of admissions were found to be multiple substance abusers (MSAs). Alcohol was the most

common drug abused, with 88 percent of the MSAs continuing to abuse alcohol plus at least one other drug. Alcoholic MSAs reported heavy daily consumption and many alcohol-related psychological, legal, and social problems. MSAs were found to have an increased probability of another concurrent secondary psychiatric diagnosis when compared with single substance abusers. MSAs presented extremely difficult treatment cases.

In the NDACP, combined treatment was demonstrated to be feasible in a variety of circumstances—inpatient and outpatient, rural and urban. Where difficulties were reported in carrying out combined treatment, the source of the problem generally was staff who could not be flexible and openminded or who were not skilled enough to cope with the MSAs problem set or who continued to view either alcoholics or drug abusers in a stereotypical manner.

The VA pilot study also found improvement in patients treated in both combined and separate settings (Baker et al. 1978). There were, however, indications that alcoholics who were treated on a separate alcoholism unit had a slightly more favorable outcome at 6-month followup than those treated on a combined unit; similar, but less strong, findings were reported for drug-dependent patients. This finding may indicate that within the substance-defined groups there will be identifiable subgroups that will respond differently to the combined and separate settings. Separate settings are often less change oriented than the combined settings (Cole and Cole 1978); the nature of the treatment milieu may play an important role in the ability of the patient to change (Cronkite and Moos 1978). The single-substance-abusing alcoholic does exhibit a different set of needs and problems and may very well do better in a separate treatment milieu (Diesenhaus and Wackwitz 1979).

As part of the NDACP, a review of the literature was undertaken; Carroll and Malloy (1977) concluded that reports of clinical trials cautiously support combined treatment. They noted, however, that there had been few rigorous experiments to determine the comparative effectiveness of combined versus substance-specific treatment. The NDACP was not a controlled experiment, nor was the VA pilot project since random assignment was not carried out, but comparisons were made among programs in different cities.

The only recent study to use random assignment to a separate versus combined treatment program was also carried out at Eagleville Hospital and Rehabilitation Center. This study did not find either to be more effective (Aumack 1977). At both discharge from residential treatment and 8-month followup, neither the combined nor the separate treatment condition resulted in differential effects for either alcohol or drug abusers. On the average, clients in both treatment modes improved on a variety of outcome criteria. The conclusion reached was that the decision to combine would need to be made on grounds other than therapeutic benefit. If treatment effect is the same for both combined and separate treatment of alcohol and drug abusers, then

issues like cost, efficiency and convenience would be paramount in deliberations about policy and funding changes.

It would seem that further research is needed to confirm or refute the findings of the Eagleville study and the VA study. It is highly unlikely that we are ready on a national level to move toward a combined treatment orientation. There are too many administrative problems (e.g., different funding mechanisms, different definitions for treatment settings or environments, different data and monitoring systems, different constituencies) and insufficient data on the actual prevalence of multiple substance abuse. Moving toward a combined treatment orientation may require a reconceptualization of the nature of alcohol and drug abuse treatment (Ottenberg 1977).

One of the NDACP recommendations, which can be readily implemented, was that alcoholism treatment programs should begin paying more attention to the potential existence of multiple substance abuse in their clients and collecting data on its existence (Carroll 1977; Tuchfeld et al. 1975). The current NIAAA data-monitoring system does not include such information so it is not possible to gage the actual percentage; it can be estimated that 30-40 percent of those persons seeking alcoholism treatment are MSAs. This percentage may be lower for agencies that emphasize their alcohol-specific treatment profile (Pattison 1979). However, without the routine collection of data on current and past drug use, there are no accurate means of determining the extent of the problem and its impact on treatment effectiveness. MSAs are more likely to fail in alcoholism treatment that does not identify and deal with their unique characteristics (Diesenhaus 1979). For this variety of alcoholic, at least, combined treatment does seem appropriate. The question is still open for the alcoholic who does not abuse other drugs.

Refinements in Treatment Methods

Pharmacotherapy

The use of drugs to treat alcoholism continues to be an area of controversy. Pharmacological agents are used in (1) managing intoxication and physical complications of excessive alcohol use, (2) treating the acute withdrawal syndrome, (3) providing symptomatic relief after detoxification, (4) deterring alcohol consumption, and (5) treating chronic alcohol dependence on a long-term basis. The value of drug therapy is questioned by those who believe the therapeutic use of psychoactive medication leads to the development of dual dependencies (O'Briant et al. 1973). Others hold that the value of pharmacologic assistance is still an open question which must be responded to by judicious use of drug therapy with carefully selected patients for a specific purpose (Becker 1979; Cole and Ryback 1976; Hubbard et al. 1978; Schuckit 1979a, b, c). The controversy will probably flare again if

the recent trend toward ambulatory chemical detoxification becomes more widespread (Feldman et al. 1977; Kolodner 1977; Tennant 1979). The value of pharmacotherapy for treating alcoholism may well vary significantly in each of the five areas listed, and the judgment of value in each should be made independently for each area on the basis of empirical evidence rather than ideological suasion. This paper will not present a comprehensive review of the pharmacotherapy of alcoholism but will discuss some major trends.

Historically, all treatments for alcoholism, particularly drug treatments, have looked good. Generally, the initial efforts were uncontrolled clinical trials conducted by enthusiastic investigators. Later efforts at replication and control failed to confirm initial findings. Memory of this cycle leads to skepticism for many when new drug successes are reported. In a review of the literature on randomized controlled trials (Emrick 1979), only two drug treatments were found to have long-term effectiveness when compared with other interventions—lithium versus placebo in depressed alcoholics (Reynolds et al. 1979) and disulfiram implant versus sham implant (Wilson et al. 1976). Currently, continued use of pharmacotherapy in the treatment of chronic alcohol dependence is based more on clinical experience than research evidence. There is no specific pharmacotherapy for alcoholism. Many studies show that the patient, not the drug, plays the dominant role in the treatment program (Becker 1979). Drugs are being used primarily as an adjunct to other treatment methods.

Hubbard et al. (1978) stressed that carefully planned and monitored pharmacotherapy with mixed substance abusers has been effective in replacing the desperate driven attempts at self-medication. They criticized the ideological rejection of all chemotherapy within some therapeutic communities. Balancing the risk of reinforcing psychological dependence on drug use per se against the prior history of chronic treatment failures in drug-free programs, they concluded that not using appropriate psychotropic drugs would be inappropriate. They provided a set of conservative guidelines for psychopharmacologic management of mixed substance abusers which can be of significant use in all alcoholism treatment facilities, particularly as the number of such persons increases. Ziegler-Driscoll and Sobel (1978) discussed how pharmacotherapy can be used effectively in an abstinence-oriented combined alcohol/drug therapeutic community.

Several recent studies have attempted to determine whether use of pharmacotherapy could aid in retaining patients in outpatient treatment (Smart and Gray 1978) and detoxification (Reed and Mandel 1979). The results are equivocal. Smart and Gray (1978) suggested that, contrary to the growing trend, receiving medical evaluation and medication was related to retention in treatment for lower middle and lower class alcoholics. The interaction between type of treatment (individual and group counseling) and medication suggests that retention was related to more intense treatment and contact when pharmacotherapy was an important component of the overall treatment plan. Administration of

chlordiazepoxide to aid withdrawal in a hospital detoxification service was not related to completing the 7-day program (Reed and Mandell 1979). Additional studies of this variety should be helpful.

Disulfiram (Antabuse) is no longer used for treatment of chronic alcoholism in and of itself but is used as an adjunct to a comprehensive treatment regimen (Kwentus and Major 1979), although this principle is not always recognized by courts referring alcoholic problem-drinking offenders for mandated treatment. The effect of disulfiram depends on a complex set of pharmacological and psychological actions which must be considered in planning treatment. The major value of disulfiram appears to be as a deterrent against resumed drinking (Ewing 1980); its deterrent effect is more likely to be psychological than chemical both as an implant and taken orally (Kitson 1977, 1978; Kline and Kingstone 1977; Kwentus and Major 1979; Sauter et al. 1977; Silver et al. 1979). The act of taking the drug represents the alcoholic's determination to avoid drinking since he or she is aware of the unpleasant physical consequences; disulfiram does not work by reducing craving (Silver et al. 1979).

Concern continues over low patient compliance with the prescribed regimen. Development of tests to measure compliance has been suggested. Paulson et al. (1977) suggested a breath test measuring the excretion of carbon disulfide, effective for 15 to 16 hours after a dose of disulfiram. Use of the test yielded positive results for only 25 of 52 patients who claimed to be taking disulfiram. Gordis and Peterson (1977), using a urine test, found that 20 percent of those studied were not using the drug as claimed. Observation of ingestion is commonly used, especially in court-ordered treatment. A better method is to select patients on the basis of prior empirical studies of compliance and favorable outcome (Baekeland 1977; Dwentus and Major 1979). Controlled studies suggest that the patient who does better on disulfiram is older, better motivated, able to form dependent relationships, and more likely to have had blackouts and to have compulsive personality traits. Uncontrolled studies suggest that the patient who does better is more socially stable. Patients who do not do well are moderately to severely depressed, manifest sociopathic features, have a highly compulsive drinking pattern, and seem unable to stop after a few drinks (Baekeland 1977). The role of motivation is critical; the patient who accepts it eagerly (unless manifesting sociopathic personality) does better than the reluctant participant. Using group discussions to support the taking of the drug through developing its continued use as normative for group membership may aid compliance. Using contingency contracting, tying continued use of disulfiram to a strong reinforcer, can be very effective (Baekeland 1977). Liebson et al. (1978) used a strategy of linking continued methadone maintenance or psychotropic medication to compliance. Disulfiram has been reported to have mild sedative effects; used at bedtime it may relieve the sleep difficulties and mild anxiety common in the early stages of postwithdra-

wal abstinence (Kwentus and Major 1979). Continued attention must be paid to physical signs contraindicating use.

Following the demonstration in several uncontrolled clinical trials that depressed alcoholics did better than placebo controls at 1-year followup, the use of lithium in the long-term treatment of chronic alcohol dependence continues as a major area of investigation through controlled studies (Goodwin 1979*b*; Merry 1979). There has been a long history of trying various antidepressants as treatments for chronic alcoholic dependence; however, there is no evidence that antidepressants are more effective than placebos in reducing excessive drinking or related problems. Schuckit (1979*c*) suggested that lithium, which is effective in treating acute mania and in reducing future episodes of depression and mania, can be effective with those alcoholics diagnosed as having primary affective disorder/secondary alcoholism and would not be effective with those diagnosed as primary alcoholics.¹ The primary versus secondary distinction is based on the chronological development of symptoms and is offered as a means of clarifying prognosis and treatment. (Woodruff et al. [1979] described a fourth group without distinguishing which condition is primary; this group manifested symptoms of alcoholism, affective disorder and sociopathy.) One study established that 20 percent of female alcoholics and 5 percent of male alcoholics demonstrated primary affective disorder/secondary alcoholism; it is this subgroup that might respond to lithium therapy (Reynolds et al. 1979). Another study of male hospitalized alcoholics found 35 percent to be diagnosed as affective disorder alcoholics. Affective disorder alcoholics were more likely to be found in the repeat admission group (O'Sullivan et al. 1979).

Many alcoholics manifest depression when they seek help. Although the symptoms resemble those seen in primary affective disorders, they are generally less severe, are related to stressful life events and/or the consumption of alcohol, and are time limited, whether or not the patient receives treatment (Goodwin 1979*b*; Schuckit 1979*c*). These primary alcoholics/secondary depressive reactions would not be good candidates for lithium therapy. Lithium remains the most promising drug for the treatment of alcohol dependence; its effectiveness is most likely limited to a well-defined subgroup of primary affective disorder/secondary alcoholism.

¹Affective disorder indicates a persistent change in affect or mood. In unipolar affective disorder, only depressions occur; in bipolar affective disorder, both manias and depressions occur. Bipolar affective disorder is an infrequent condition—18 per 1,000 for men and 25 per 1,000 for women; however, an estimated 20-67 percent of those with primary bipolar affective disorder have periodic alcohol problems—increasing drinking and, possibly, problems during episodes of mania and, perhaps, also during periods of depression (Schuckit 1979*c*). Happily for those in the alcoholism field, there is just as much confusion over the nature and diagnosis of depression(s) as there is about alcoholism(s). Workers in the alcoholism field often get defensive about the lack of consensus on diagnosis and differentially effective treatment; they are not exposed enough to similar problems in working with other syndromes (Goodwin 1979*a*; Schuckit 1979*c*).

Behavioral Assessment and Treatment

The *Third Special Report on Alcohol and Health* (U.S. Department of Health, Education, and Welfare 1978) described the theoretical basis and the various forms of behavioral therapy so there is no need to repeat that description here. Rather, this paper will focus on some current developments. Research is continuing to refine which behavioral methods work under which conditions with which groups of patients.

Although behavioral therapists have been involved in the controversy over controlled drinking versus abstinence at the goal of alcoholism treatment, the use of behavioral treatment techniques does not depend on accepting the controlled drinking goal. Research has turned to identifying pretreatment subject characteristics that predict treatment success under either goal (Nathan and Marlatt 1978; Sobell and Sobell 1979; Vogler et al. 1977). The next few years will see increasing use and modification of behavioral assessment and treatment (Editorial 1978).

Behavioral assessment involves direct observation of target behaviors, either in the laboratory, in some other controlled or simulated environment, or in the natural environment. Direct observation of the target drinking behavior in hospitalized patients has been used in several studies of behavioral treatment (Gottheil et al. 1977; Sobell and Sobell 1978). Behavioral assessments are designed to identify the antecedent events that trigger the target behavior; the maintaining stimuli that reinforce the target behavior; the range of factors in the environment that reinforce both target and nontarget behaviors; the intensity, frequency, and pattern of the target behavior; and the reinforcers in the environment that can reduce or eliminate the target behavior. This identification is accomplished through pretreatment observation of relevant target behaviors lasting as long as 2 weeks to establish baseline rates. A program to change those factors is then developed by the patient and therapist working together. Periodically during treatment and at the end of treatment, observations are made to gauge changes in the target behavior.

For example, behavioral assessment has revealed that normal drinkers and alcoholics differ significantly in the components of drinking behavior—the normal drinker typically has a mixed drink, takes a smaller sip, takes many rapid, small sips, and drinks slowly, while the alcoholic typically has a straight drink, takes a larger sip, takes large, slow sips, and drinks very fast (Billings et al. 1978; Sobell and Sobell 1978). Using initial assessment of sipping behavior, the therapist can focus treatment directly on shaping the alcoholic's drinking behavior to approximate normal drinking patterns through use of aversive conditioning procedures.

Chemical aversion techniques, blood alcohol level discrimination training, and contingency contracting appear to have won some support as effective techniques (Nathan and Lipscomb 1979). The findings of effectiveness for chemical aversion therapy must be tempered by

recognizing that no controlled studies have been done and that the findings are reported for socially stable, motivated patients who have a better prognosis than those entering most other forms of treatment (Hodgson 1977). The setting for administration of the chemical aversion technique is generally an inpatient unit which also offers other forms of treatment, e.g., AA, group therapy, social and recreational therapy. Its effectiveness as a treatment for other socioculturally defined varieties of alcoholism is unknown. Questions about the appropriateness of chemical aversion therapy under any condition have been raised by third-party payers, including the Federal Government. Although chemical aversion is considered relatively effective, its continued reimbursement eligibility has been under review. Because questions have been raised regarding the nonscientific nature of the review, reimbursement continues. However, scrutiny of the appropriateness of chemical aversion also continues. The value of aversion therapy, whether it be chemical, electrical, or verbal, is to suppress alcohol misuse while the person is learning new modes of responding that are incompatible with excessive drinking (Miller 1976). Aversion therapy can be effective as part of a carefully designed treatment program that also includes counseling, attention to social support systems (family, AA), and aftercare booster sessions (Nathan and Lipscomb 1979).

Consensus is emerging that electrical aversion procedures are ineffective. Questions have been raised regarding the value of systematic desensitization when used by itself (Nathan and Lipscomb 1979). The value of covert sensitization in the treatment of alcoholism has also been questioned (Little and Curran 1978). Blood alcohol discrimination does not seem ready to be transferred from an experimental method to large-scale clinical use because of the questions about alcoholics' ability to estimate their blood alcohol level. Assertiveness training and biofeedback training have already moved into large-scale clinical use; needed now are a series of controlled studies testing under which conditions and with which varieties of alcoholics and problem drinkers these methods are appropriate.

The value of any one behavioral technique used alone has been questioned. All techniques are administered in an active environment with often unspecified characteristics. Proponents of behavioral therapy for alcoholism have advocated broad-spectrum behavioral treatment programs that combine a number of different techniques. Individualized behavior therapy for alcoholics (IBTA) is such a package; it includes four major and several minor components. The major components are (1) shock avoidance procedures, (2) videotaped self-confrontation with drunken behavior, (3) availability of alcohol drinking as part of the treatment program, and (4) individualized talk therapy focused on training in problem-solving skills (Sobell and Sobell 1978). A difficulty with the broad-spectrum approach is that there is no simple way of knowing which component is contributing the most variance to treatment outcome. Studies need to be carried out on equivalent samples comparing different arrangements of components.

There appears to be an acceptance of behavioral therapy techniques, if not theory. It is possible to incorporate behavioral treatment methods within a treatment regimen that has a medical orientation rather than a learning theory orientation, and many treatment programs have included specific techniques like biofeedback training, contingency contracting, and assertiveness training (Cummings 1979; Nathan and Lipscomb 1979; Poley et al. 1979; Wallace 1978). For example, contingency contracting, the systematic scheduling of both the positive and negative consequences of target behaviors, represents a refinement of a practice long used in conventional alcoholism programs which typically have tried to provide clear-cut behavioral expectations to new admissions through the use of written treatment contracts, didactic presentations, written materials, and community meetings. The AA Twelve Steps to recovery have frequently served as a guide for structuring treatment activity and measuring treatment progress. Contingency management contracting techniques, however, are more detailed, based on behavioral assessment, and more consistently applied; the contracts represent an improvement over the less structured prior efforts. The focus is on specifying the target behaviors and the consequences of emitting those behaviors. More widespread use of these evaluation procedures in developing a treatment contract could be helpful to a variety of alcoholism treatment programs which do not now consistently follow through on the fairly standardized contracts developed with clients at admission (Miller 1976). Contingency contracts have three basic components: (1) a written agreement specifying the simple target behaviors to be increased or decreased, (2) the reinforcement contingencies attached to compliance and to noncompliance, and (3) the development through behavioral assessment of what potential environment reinforcers exist. The contract should be developed through mutual agreement and signed by both the therapist and the client if the contingencies are to have any potency.

Contingency contracting has been used successfully by Cummings (1979) in developing a treatment method for addictive personalities. This method (exclusion therapy) involves a mandated 6 months of group therapy; the group therapy is preceded by 4-12 individual sessions for withdrawal and development of motivation and involvement. Abstinence is demanded as a condition of treatment; coming to a session intoxicated leads to exclusion. More and more, such refined behavioral assessment and treatment techniques will be used as part of the treatment of alcoholism.

Family Therapy

There has been a slight increase in the use of family therapy in the treatment of alcoholism over the last 5 years (Jantzen 1977; Kaufman and Kaufman 1979; Sowder et al. 1979; Steinglass 1979a). Family therapy is a term used to describe a wide variety of therapeutic techniques used by clinicians who share a common conviction that

disturbed family life plays a significant etiological role in individual pathology and that seeing the family together will produce positive change (Steinglass 1979a). For the family therapist, the treatment targets are not the abusive drinking of the alcoholic person but rather the interactional and communication patterns of the family. Specific questions of interest are (1) what differences exist in communication patterns when the identified patient is sober and when intoxicated? (2) What is the characteristic pattern of relations between family members that emerges when alcohol is present? Although alcoholism has long been described as a family illness, family therapy has only recently come to be viewed as a viable treatment option. Several reasons have been offered for this delay.

Family therapy itself did not emerge as a field until the mid-1960s. Steinglass (1979a) saw a conflict between family therapy and the medical model of alcoholism which focused on the disease process within the individual. The alcoholic person had previously been seen as the primary focus of treatment. Working with family members to help them cope with the alcoholic's destructive behavior was done concurrently but separately (Byrne and Holes 1978; Howard and Howard 1977; Mock et al. 1979). Steinglass (1979a) also viewed the traditional focus on the goal of abstinence as an isolated behavioral change to be another source of delay. Family therapy holds that the focus should be on change in variables such as communication style and the family's relationship system; reduction in drinking becomes a secondary consideration for some family therapists who primarily seek a change in the quality of family life rather than abstinence. The use of family therapy by alcoholism treatment practitioners, however, does not always stem from such theoretical analyses but from pragmatic recognition of the value of family therapy in working with alcoholics (Dulfano 1978; Flanzer 1978).

There is an increasing tendency to view the alcoholic's drinking in terms of his or her interaction with the multigenerational family. During the diagnostic phase, emphasis is placed on determining how the identified patient's alcoholism helps the family to maintain its homeostatic balance (Davis et al. 1978; Steinglass 1979a). Current efforts are primarily directed at developing and describing improved techniques for diagnosis and intervention with the family system. Controlled experiments comparing family therapy with other treatment methods are rare (Jantzen 1977; Sowder et al. 1979).

The use and study of family therapy with alcoholics are not as widespread as would be expected given previous praise (U.S. Department of Health, Education, and Welfare 1974). In 1978, NIAAA-funded projects reported using individual therapy most frequently with 50 percent of outpatients receiving an average of 4.9 hours per client episode. Group counseling was used next most frequently, with 25 percent of the clients receiving an average of 14.3 hours of treatment. Only 9 percent of the clients were involved in family treatment, for an average of 3.3 hours. Women clients (14 percent) were more likely to participate in family treatment (Ferguson and Kirk 1979).

Research into the structure and dynamics of the alcoholic's family preceded active intervention with the family. Early studies focused on the spouse (usually the wife) and on their pathology; early interventions involved supporting the wife during efforts to bring the alcoholic into treatment. Current interventions include continued work both with the spouse alone and with the entire family. Also used is multiple family therapy where a number of families are treated together in a group setting (Steinglass 1979a).

There has been experimentation with the joint admission of an alcoholic and his or her nonalcoholic spouse. The marital couple lived together on the ward and participated in activities, both together and separately—e.g., a group for spouses only, a group for patients only, and a couples' group. Alcohol was freely available. The joint admission allowed staff to observe the couple's interactions and provide feedback about their communication and interaction patterns when alcohol is present and absent. The spouse had the same opportunity as the alcoholic to learn about alcohol and its effects, to experience the social climate of the treatment unit, and to learn the same approach to handling alcohol and other problems. Findings showed slight positive changes in drinking patterns, marked changes in interactional behavior, and reduction of psychiatric symptomatology in the nonalcoholic spouse (Steinglass 1979b).

Recently, descriptions of the application of family therapy to various special population groups have begun to appear—for Hispanics, employed alcoholics (Mock et al. 1979; Palkon 1979), elderly alcoholics (Rathbone-McCuan and Triegaardt 1979), and youth (Kaufman 1979; Spiegel and Mock 1978). Several examples of these variations will be given.

A variation of Minuchin's structural theory and therapy was used with Cuban immigrant families of alcohol and/or drug abusers (King 1976; Szapocznik et al. 1977). The researchers hypothesized that alcohol and drug abuse were caused by difficulties in acculturation. They found family therapy to be the treatment of choice whenever symptomatic substance abuse appeared in a child or an adolescent and, particularly, when intergenerational and acculturational differences disrupted the family's process of conflict resolution and the parent's executive role in the family. Individual therapy was sufficient when the client was moderately acculturated, resourceful, and educated. Modifications of Minuchin's methodology were developed to make it coincide more closely with the Cuban value system.

Zeigler-Driscoll (1979) described a study involving both alcoholics and drug abusers in family therapy while inpatients in a combined treatment program. No differences were found in the dynamics of families of drug addicts or alcoholics; the same methods were used with equal success in both groups even though the traditional view is that alcoholics and drug abusers differ in age, personality, and family dynamics.

The use of family systems theory and techniques in the assessment and referral process for employee assistance programs (EAP) was advocated by Mock et al. (1979). Family members are included in initial assessment sessions; a minimum of three such sessions is seen as necessary to develop thorough family system data, obtain drinking behavior data on all members, and emotionally engage all the family members in the process. A treatment plan involving all family members is developed and a family treatment contract is designed which includes the followup responsibilities of the EAP counselor. Referral is made to family-oriented community agencies. Followup sessions involve all family members and the treatment personnel. Other procedures are carried out as they would be in a traditional individually oriented EAP.

Moos et al. (1979) found that successful outcome after completing a residential program was related to certain characteristics of the family environment to which patients returned—cohesiveness, active pursuit of leisure time activities, and absence of conflict. They suggested that gathering systematic information about the family environment with a simple assessment technique such as their family environment scale should be done routinely. Their rationale for this procedure was that traditional patient-focused alcoholism treatment can be undertaken when family cohesion is high but is likely to be unsuccessful when it is low. Family therapy could be undertaken when family cohesion is low and precede patient-focused alcoholism treatment.

These diverse examples reflect the current level of development of family therapy in alcoholism treatment programing. Individual agencies and practitioners are conducting clinical trials. For family therapy to become more generally used, there will need to be well-controlled studies of its effectiveness, more extensive training of alcoholism counselors in the application of the method, and development of means to determine when its use is appropriate. The need for more attention to the inclusion of the family in alcoholism treatment is underscored by the knowledge of the high risk of future alcoholism and other forms of individual or social pathology incurred by children of alcoholics.

Developing Specialized Treatment Techniques and Programs for Special Need Populations

In the *Third Special Report on Alcohol and Health* (U.S. Department of Health, Education, and Welfare 1978), there was a discussion of how the unique characteristics of special population groups influenced alcoholism treatment. Barriers to receiving treatment were identified for youth, women, the elderly, the Spanish speaking, American Indians, and blacks. The role that sociocultural factors play in the etiology, maintenance, and treatment of alcohol problems was reviewed for each of these groups. During the past few years, additional emphasis has been placed on developing alcoholism treatment programs and strategies

targeted at these and additional categorically defined subgroups that share some common psychosocial attributes or social status. The basic principle underlying these efforts is that design of the treatment program must be tailored to incorporate the needs and characteristics of the special population if it is to be effective. The principle can be viewed as an extension of the earlier studies which demonstrated that social class and social distance between patient and clinician played a role in the diagnosis and treatment of alcoholism and that characteristics of the treatment environment facilitate or impede treatment. The relationship of each special population to the larger society must be understood by treatment personnel if their efforts are to be effective (Bourne and Light 1979; Christmas 1977; Harper 1979).

As Heath (1979) pointed out, the generic term *populations* takes in a wide range of categories, many of which do not truly make up a self-identified group. However, properly used information on special populations is valuable in understanding the types of problems that characterize such populations and in designing treatment programs that will be effective for these problems. The focus on special populations is consistent with the interactional perspective discussed by the World Health Organization Group of Investigators (Edwards et al. 1977) which emphasizes that diagnosis and treatment must take into account the cultural context.

In addition to the previously mentioned populations which will be discussed in other chapters (ethnic minority, sex, and age groups), there are other groups made up of individuals who share a given personal, social, or legal status which is seen as relevant for determining the nature of alcoholism treatment needed—public inebriates and skid row alcoholics, drinking drivers, physically impaired alcoholics, incarcerated problem drinkers, polydrug abusers and multiple substance abusers, and diverse occupational groups like doctors, armed services personnel, lawyers, migrant workers, factory workers, and pilots. An increasing number of reports have appeared regarding the variations of the alcoholism syndrome to be observed in these groups and of the unique or modified treatment interventions required by each. Despite the group members' heterogeneity on many attributes, treatment programs based on their common, unique characteristics have been developed or proposed. While some of these groups may not represent subcultures in the same manner as those discussed in the last report, there is sufficient commonality to suggest that the same general principles apply.

The need for treatment programs focused on the unique needs of identified special population groups is based on findings that the proportion of members of these groups in treatment is generally disproportionately lower than their representation in the overall population and that those who do enter traditional treatment programs drop out at a higher rate and have lower success rates (Sue 1978). These findings have led to recognition of the need to design outreach and treatment programs tailored to the unique culture of the targeted special

population. A key underlying factor in unsuccessful treatment has been the social distance between the counselor and the client; these programs are designed to reduce that distance between the special population and the treatment system. However, given that the majority of these alcoholics are seen in mainstream treatment agencies and that resources are not available to develop independent treatment systems, it is important to determine what changes are needed in the existing system to better respond to the multiple special population needs (Christmas 1977; Harper 1979; Linn et al. 1979; Sue 1978). Staff of all treatment programs will be required to examine how their stereotypic attitudes toward special populations influence the design of treatment programs and individual treatment experiences. Mixed programs will need to incorporate specialized techniques for treating the special population alcoholic.

For example, more black alcoholics are treated in predominantly white alcoholism programs than in specialized black programs (Ferguson and Kirk 1979). In 1978, only 10 of the 510 NIAAA-funded projects were identified as programs for blacks. These 10 programs served only 5,352 of the estimated 40,330 blacks among the 245,915 persons served by the 464 reporting projects. Nor were all of those served in these 10 projects black; only 65 percent of the projects' intakes were black.

The push in recent years has been to uncover which key subcultural characteristics are causing and sustaining problem drinking and, then, to design treatment strategies responsive to these key characteristics. Efforts are then undertaken to evaluate their effectiveness. Evaluation, however, is just beginning. This section will include a description of some of these efforts and the resulting strategies used in treating several of these special populations.

Treating the Public Inebriate and Skid Row Alcoholic

It has been almost 10 years now since the passage of the Uniform Alcoholism and Intoxification Treatment Act. It has been 6 years since the development of incentive grants to States that pass the act. Thirty-two States have now decriminalized public intoxication and begun to develop networks of hospital and nonhospital detoxification and halfway house programs as alternatives to the local jail for sobering up the public inebriate (National Institute on Alcohol Abuse and Alcoholism 1980). A variety of alternative models of detoxification and treatment/rehabilitation networks have been developed. (The controversy regarding the value of each type continues, as has been discussed above.)

The public inebriate and skid row alcoholic are lumped together for discussion primarily for historical purposes. It is time to begin to differentiate them. While at one time the two groups may have been thought of as the same, this condition no longer holds. It has become evident that they constitute different special populations and require

differential treatment responses. Although it is commonly estimated that skid row alcoholics make up only 3 to 5 percent of the total alcoholic population, their severely debilitated condition and continual relapsing requires that a significant portion of resources be invested in sustaining them even if their chronic alcoholism is not reversed. The term *relapse* is preferred to the commonly used term *recidivism*. Recidivism implies a continuation of the moralistic, punitive model. Relapse is more consistent with the preferred biopsychosocial or sociomedical model.

The widespread dispersion of detoxification centers as a result of the passage of the Uniform Act (National Institute on Alcohol Abuse and Alcoholism 1980; Scrimgeour and Palmer 1976) has brought the treatment system into contact with public inebriates who do not fit the stereotype of the homeless unemployed skid row alcoholic but who are more likely to be working residents. Attractive new facilities have been built in some communities and receive a number of police and family referrals of blue-collar and white-collar alcoholics who might in previous years have been taken home to sleep it off or to a hospital emergency room for a quick patch up and medical admission instead of being arrested and processed as would have happened with the skid row resident. This principle is illustrated by an interesting study of women admitted to countywide detoxification centers (Schuckit and Morrissey 1977). The admissions were heterogeneous with respect to social class and primary diagnosis. Some of the women were diagnosed as not being alcoholic (28 percent); of the remainder, 53 percent were diagnosed as being primary alcoholics and 19 percent were diagnosed as being alcoholics secondary to preexisting antisocial personalities or affective disorders. There was a range of social classes represented also—24 percent in the highest class, 33 percent in the middle, and 43 percent in the lowest.

This study provides an example of the diversity of persons now being admitted to nonhospital detoxification centers and strengthens the need to avoid stereotyping all nonhospital detoxification center admissions as skid row alcoholics. The major proportion of detoxification admissions would appear to be from that group identified by Kissin (1977a) as the socially disrupted inner-city alcoholic and the blue-collar alcoholic. Raising the treatment effectiveness rate for the public inebriate population will require further partitioning into meaningful subgroups and appropriate referral. This distinction between the skid row and working class public inebriate is not currently being made at the national level. NIAAA-funded public inebriate programs tend to be located in skid row areas and, therefore, see fewer of the "inner-city socially disrupted" or "blue-collar" or "white-collar" alcoholics who have a greater degree for social stability and more personal resources.

In 1978, NIAAA funded 20 public inebriate programs (PIP) which served an estimated 19,583 persons. Monitoring data are available for 17 of these projects. There were 4,378 intakes; a review of the characteristics of these admissions can be helpful in understanding the unique problems in trying to treat the skid row public inebriate (Ferguson

and Kirk 1979). The population served by these projects is very different from that served in the other NIAAA categorical programs. It is the oldest, with an average age of 42 years; the most socially deteriorated, with 52 percent divorced or separated and 81 percent unemployed; and the most seriously alcoholic, with an average of 15.5 years of heavy drinking and consuming an average of 8.8 ounces of absolute alcohol per day. It is the special population that is most likely to have had prior treatment (53 percent). The typical admission to one of these skid row programs is an unemployed white male. Education completed is only 9 years, the lowest for any categorical program, and the likely occupation is laborer. Annual household income, again, is the lowest of any category at \$4,103 per year. These are all characteristics associated with social instability and severity of alcohol dependence and with a poor prognosis (Annis 1979; Emrick 1979; Gibbs and Flanagan 1977; Kissin 1977a).

The majority of public inebriates were either self-referred (33 percent) or referred by other treatment programs (22 percent); police referrals constituted only 5 percent. Treatment was more likely to be inpatient (59 percent) rather than outpatient (54 percent), since their drinking problem is seen as more severe. Public inebriate residential stays tended to be longer than for clients in other categories; a longer stay was particularly true for acute medical care hospitalization. Outpatient treatment was focused on group counseling and vocational assistance services. Even with the overall client group manifesting poor prognosis, positive change was noted after 180 days for the followup sample—decreases in days drinking, alcohol consumed, and the Impairment Index. The percentage abstinent in the preceding 30 days rises from 8 percent to 46 percent. The percentage working rises from 21 percent to 43 percent.

In contrast, recent studies of the effectiveness of the Ontario detoxification-halfway house system have raised questions about the value of the public health approach to the treatment of the public inebriate (Annis 1979; Annis and Liban 1978; Annis and Smart 1978; Ogborne and Wilmot 1979; Smart 1977; Wilmot 1978). Although this has been a rather pessimistic series of studies, there have been a number of important findings and points made. The studies confirm the predictions of critics such as Pittman (1977) who argued that the passage of the Uniform Act alone was not sufficient to eliminate the public inebriate problem and pointed out the difficulties which would be encountered in attempting to develop the full range of comprehensive services needed.

Evaluation of the impact of decriminalization of public intoxication needs to be tempered by the recognition that not enough funds have been appropriated to develop the needed resources (Scrimgeour and Palmer 1976). Evaluation also needs to be tempered by recognizing that some of the original goals and expectations were incorrect. The adoption of the Uniform Act has done much to destigmatize alcoholism in general and increase access to alcoholism treatment, but it has not

brought or kept the chronic public inebriate into treatment voluntarily as originally intended (Gradd 1978; Room 1977).

An implicit expectation in the minds of many was that a network of detoxification centers for public inebriates would lead to "curing" their alcoholism. This expectation was wholly unrealistic in that it did not take into consideration the nature of alcoholism as a chronic, relapsing phenomenon, the resistance to following through on rehabilitation shown by many alcoholics once past the acute crisis of withdrawal, the skid row and other clients' psychological dependence and/or involvement in a drinking subculture which cannot be countered in a 2-to-14-day treatment encounter, and the need for multiple admissions if treatment personnel are to develop a rapport with the skid row alcoholic that could lead to participation in an extended rehabilitation program.

Skid row alcoholics are not all the same; four types of skid row alcoholics may be identified using employment and mobility/transiency dimensions: (1) highly mobile workers, (2) working residents, (3) semiemployed residents, and (4) the homeless unemployed (Hobfoll et al. 1980). The stereotypic impression of the skid row alcoholic is most clearly met by the homeless unemployed; this socially debilitated group is the one most frequently encountered in the skid row detoxification center, yet members of all four groups drink heavily and may be admitted for care. Each type has different treatment needs. The desire for treatment is low for the homeless unemployed skid row alcoholic; there is a pattern of brief, sporadic interactions with helping agencies, getting immediate needs met and moving back into their pattern of socializing and drinking on the street. Breaking this pattern will require recognition of its cultural and personal significance.

Wilmot (1978) suggested that a source of resistance to change is the role that skid row alcoholics' drinking pattern plays in earning them status in the street subculture. He suggested that treatment programs use the skid row alcoholic's status needs in achieving change through developing a new identity. He also differentiated three types within the homeless unemployed group of skid row alcoholics on the basis of their drinking behavior: (1) functional drinkers, drinking to a level which does not impair one's role performance; (2) pathological drinkers, drinking in order to obliterate stress and psychic pain; and (3) competitive subcultural drinkers, drinking with a bottle gang within the roles of the "bottle game." For functional and subcultural skid row alcoholics, Wilmot suggested that a new identity can be achieved by a program's providing ongoing contact with high-status persons, less formal program rules, simple tasks that can be performed quickly to establish trust, opportunities for movement in and out of as well as up and down the program's status hierarchy, and opportunities for risk taking. The other type, pathological drinkers, is usually associated with an underlying personality disorder and would require psychiatric treatment rather than a residential recovery program. A similar analysis was provided by Miller (1976) from a behavioral therapy perspective. Behavioral assessment

and treatment techniques could be used as part of the comprehensive treatment regimen to counter the status reinforcers of the street culture.

A more positive picture is seen in the study of a Salvation Army skid row long-term (6 months) recovery program (Moos et al. 1978). Residents showed significant improvement on 7 of 9 outcome criteria at 6-month followup. The authors attributed these positive findings to the social climate and treatment approach of the program. The social environment was integrated and cohesive, staff were in touch with the residents, and staff and clients agreed in their perception of the program. The program was practically oriented with vocational training and counseling emphasized through an on-site training program. The treatment approach emphasized improving the client's overall functioning rather than only reducing or eliminating drinking. Active involvement in the program was stressed, and degree of participation was positively related to success at outcome. This study provides some guidelines for the type and distribution of treatment activities needed to reach skid row public inebriates (Bromet et al. 1977).

At the detoxification unit, the skid row public inebriate needs to be distinguished from the downwardly mobile public inebriate who had previously achieved an acceptable level of socialization and now requires resocialization. Referral of the downwardly mobile or blue-collar public inebriate to a primary treatment setting and then to a halfway house or directly to a halfway house is indicated. For the skid row public inebriate who has never achieved primary socialization, the treatment of choice probably needs to be long-term support in a sheltered domiciliary setting which could also provide behavioral training in the basic skills of personal and social competence. Expectation for growth and movement into society must be low.

A number of years ago, the ideal configuration for services to skid row alcoholics was described by Blumberg et al. (1973). The configuration included a comprehensive diagnostic, referral, and treatment facility that could treat not only the core problem of the psychological dependence on alcoholism but also the accompanying problems of general health, emotional disruption, and vocational inadequacy. Elements required were identified as (1) adequate and easily available detoxification facilities; (2) long-term (12 to 18 months) residential primary alcoholism treatment facilities away from skid row but within the home community; (3) several types of supervised housing—board and care homes for the dependent, rooming houses for the acculturated, temporary housing for the transient (to replace the cubicle hotel), and a domiciliary for those requiring long-term nursing or psychiatric care; (4) vocational rehabilitation and job placement, including operation or supervision of an employment agency to prevent exploitation; and (5) intensive casework by a counselor who follows the client through the various facilities over a period of years, providing crisis intervention as needed and support for any moves toward abandoning the skid row lifestyle.

Few of the skid row public inebriate programs funded have come close to developing this ideal configuration. Therefore it is not surprising that existing systems have been found to be relatively ineffective. The Ontario system involves primarily detoxification centers and halfway houses, although a domiciliary and outpatient services are also available. One of the reasons for the failure of this limited system to meet the goals outlined by the legislature is the shortage of detoxification beds (Annis 1979; Smart 1977). Another failure is the absence of the network of supportive services outlined by Blumberg et al. (1973). While no public inebriate treatment program in this country has been studied as intensively as the Ontario system, indications are that the findings would be similar for the majority of such programs. Some of the cities with NIAAA-funded projects (e.g., Detroit, Philadelphia) come closer to the ideal configuration than many other cities (Denver, Los Angeles).

With the addition of transportation services, the system outlined by Blumberg et al. (1973) is much like that advocated following a study of the implementation of the Uniform Alcoholism and Intoxication Act (Scrimgeour and Palmer 1976). A civilian pickup and transportation service is a necessity if the police are truly not to remain involved in the process of dealing with public intoxication, as was the intent of the Uniform Act. The advantages of such a service to not only the public inebriate and the police but also the emergency medical ambulance services system is clearly outlined in a description of Denver's Emergency Service Patrol (Boyd 1980). The patrol vehicle is operated by two State-certified emergency medical technicians who respond to calls as well as patrolling a defined route at certain peak activity times. Based on an initial evaluation, the patrol usually takes the inebriate to one of two locations for further evaluation and triage by RNs; the locations are the 100-bed nonhospital detoxification center and shelter and the alcoholism emergency room and hospital detoxification and medical care ward at Denver General Hospital (Dilts et al. 1978). If there are no beds available, the inebriate is transported to one of the five other nonhospital detoxification centers in the Denver metropolitan area or admitted to a medical services bed. The shelter is a 40-bed facility designed to provide a safe environment in which to withdraw for the chronic public inebriates who have no need for urgent medical care and who through their history of past treatment rejection have demonstrated lack of motivation to leave the skid row lifestyle. The two detox units add assessment, motivational counseling, medical care, and referral to ongoing treatment (Smith 1980). Although it incorporates medical care, easy access detoxification, halfway houses, and transportation, the Denver system is only partially complete—it still lacks a number of the elements outlined by Blumberg et al., such as supervised housing, long-term residential treatment, intensive casework, and supervised employment.

Any review of current trends in treatment programing must conclude with the observation that inconsistency marks our efforts to develop a

systematic response to already identified needs. Even when we know an answer, as for the skid row public inebriate (Blumberg et al. 1973; Kissin 1977a), we apply it haphazardly and fragmentedly (Annis 1979; Fontaine 1979; Pittman 1977; Room 1977; Scrimgeour and Palmer 1976; Smart 1977). Perhaps Ogborne and Wilmot (1979) have best stated what should currently be our realistic expectation for treatment outcome for the most socially deteriorated skid row alcoholics regardless of the level of resources used: "In general, then, it was not possible to demonstrate that the men's involvement with the counselor had any lasting effects on their drinking or life styles, but the counselor was able to respond to some crises and perhaps facilitate periods of relative stability for a few clients." Moderating crises through community support is, perhaps, the best we can do for the chronically disabled public inebriate skid row alcoholic who chooses to live outside an institution. Active treatment, however, is feasible for the working class and downwardly mobile public inebriate, and more positive results can be expected.

Treating the Problem-Drinking Driver

The relationship between alcohol use and traffic safety will be discussed elsewhere in the report. This section will deal briefly with the treatment of the problem-drinking driver who is most frequently identified though the arrest process and referred for evaluation and treatment by the court. The Federal Government, through NIAAA, has been supporting specialized treatment services to problem-drinking drivers since 1971. This funding category was started originally in conjunction with the Alcohol Safety Action Program operated by the National Highway Traffic Safety Administration (Fridlund 1977; Kisko 1976; U.S. Department of Transportation 1979a).

In 1978, NIAAA's 18 funded specialized problem-drinking driver programs served 15,798 persons. Persons becoming involved with treatment as a result of an arrest for driving following the use of alcohol (DWI) were seen within all program categories—28 percent of all intakes were DWI related (Ferguson and Kirk 1979). More DWI intakes (14,344) were seen at nondrinking driver programs. The modal intake seen by a drinking driver program was male (86 percent), aged 36, white (71 percent), divorced or separated (52 percent), had attended high school (10.9 mean school years), was employed (88 percent), as a craftsman (35 percent), and had an annual household income of \$10,359. He was most often referred by the courts for the DWI offense (49 percent) and was frequently referred to AA during treatment (65 percent). He was consuming the equivalent of 2.9 ounces of alcohol per day at intake and had been drinking heavily for 10.6 years. This was his first referral for formal treatment (73 percent). He was more likely to receive outpatient (95 percent) than inpatient services (5 percent). Outpatient services were most likely to be in group treatment.

Followup data obtained 180 days after intake for a smaller sample showed positive changes—decreased days of drinking, decrease in alcohol used per day, decreased behavioral and physical impairment, and decreased use of hospitals. Abstinence increased from 8 percent to 46 percent. Employment increased only slightly (from 83 percent to 87 percent) because so many were already working, but days worked and average monthly income increased.

These recent data are consistent with those reported earlier by Kisko (1976). As Kisko noted, the typical client in a NIAAA problem-drinking driver program is somewhat different from those seen in other NIAAA-funded programs—he is younger, is less likely to have been previously treated, has experienced fewer years of heavy drinking, is more socially stable, and is less physically or behaviorally impaired. Thus, the typical drinking driver referral has a fairly good prognosis. A study of the original problem-drinking driver projects compared DWI and non-DWI admissions (Fridlund 1977); DWI admissions tended to be better educated, hold more responsible and higher paying jobs, have a better work record, have a higher annual household income, have less years of heavy drinking, and have less consumption when drinking. This study found that drinking driver projects are effective in changing client drinking patterns and improving social functioning and that this positive change is accomplished at a relatively low cost per client.

The trend to look for subgroups of alcoholics has also been seen in the problem-drinking driver programs. Arrestees have been divided into two groups: (a) problem drinkers who have lost control of their drinking and suffer severe social, physical, and psychological consequences and (b) social drinkers who drink occasionally and have suffered no undue consequences prior to their arrest for driving after drinking (U.S. Department of Transportation 1979a). Similarly, drinking driver treatment programs have now been differentiated into a didactic, lecture-oriented component appropriate for social drinkers for whom information, discussion, and threat of future punishment have been found effective in preventing repeat arrests and a treatment component appropriate for problem drinkers for whom more intensive education, counseling, and other therapies are needed if behavior is to change (Scoles and Fine 1977; Timken 1979; U.S. Department of Transportation 1979a,b). The treatment component continues to include didactic information presentations but these are smaller interactive discussion groups rather than large lectures.

The most elaborate patient classification system yet proposed for differential treatment planning includes seven subtypes (Steer et al. 1979). Using four indexes of alcohol impairment, including two derived from NIAAA's data system, the researchers cluster analyzed records for a pool of 1,500 male DWI arrestees. Clinical experience and knowledge of the literature led to describing suggested treatment regimens for each type. The types vary in severity, and the intensity of the interventions varies concomitantly from license restrictions plus instruction on safe driving to license revocation plus court-mandated hospitali-

zation for forced withdrawal followed by probationary supervision and psychotropic medication.

Although there has been no definitive experimental evaluation of the effectiveness of comprehensive drinking driver programs, most of the studies conducted do support their general effectiveness in decreasing abusive drinking and improving psychosocial functioning, if not clearly in reducing traffic violations. Additional studies are needed in which different types of clients are assigned to different tailored modalities on the basis of pretreatment assessment (Michelson 1979; Nichols et al. 1979; U.S. Department of Transportation 1979a,b; Zung 1979). Treatment of the drinking driver is clearly not yet a substitute for civil sanctions and criminal penalties, but is a valuable supplement. Further progress depends on better client classification systems and more specific treatment methods. Wider availability of well-designed drinking driver programs is needed. Increased sophistication is needed in (1) assessing at intake the type and severity of alcoholism (Steer et al. 1979), (2) assessing the likelihood of recidivism (Booth and Grossweiler 1979), (3) relating sociodemographic characteristics to treatment needed (Zung 1979), and (4) designing appropriate interventions (Holser 1977) in order to make subsequent referral to the appropriate treatment lead to improved effectiveness rates. Further studies refining the successful treatment methods used and their dissemination to both the specialized drinking driver programs and the other categorical programs are necessary. While additional specialized programs are needed, it is clear that the majority of drinking drivers will be seen in more general programs. Drinking driver programs can also serve as vehicles for bringing more blacks and other minorities into treatment earlier, if these programs are designed to reflect these groups' relevant cultural characteristics (Argeriou 1978; Harper 1979; Scoles and Fine 1979).

Treating the Incarcerated Alcoholic

There has been little progress in the development of alcoholism treatment programs for inmates of correctional facilities over the last 10 years. A recent Government Accounting Office (GAO) report criticized the level of treatment presently available to inmates with acute and chronic alcohol problems in all settings within the institutional corrections system (jails, State and Federal prisons). Estimates of adult inmates with a history of severe alcohol problems range from six percent to forty-two percent; estimates of those inmates with alcohol and/or other drug problems range from 40 percent to 80 percent (Comptroller General 1979). At the end of 1978 over 300,000 persons were being held in Federal and State correctional institutions across the Nation; over 95 percent are male, and minorities are disproportionately represented. Conservatively estimated, 18,000 of those inmates are in need of alcoholism treatment; a more realistic estimate of those in need would be 25 percent, or 75,000.

The GAO report, however, found that, at the Federal level, the Bureau of Prisons has concentrated on treating drug abusers rather than alcohol abusers, with only 5 of its 38 institutions having alcohol abuse units as of March 1978. At the State level, the GAO found little systematic identification and treatment of alcoholics. The report was also very critical of the efforts of Federal agencies in implementing legislative mandates to improve treatment for alcoholic inmates held in the State prisons. In 1978, NIAAA funded seven criminal justice projects which served 2,380 persons (Ferguson and Kirk 1979); only three of the seven projects concentrated on treating incarcerated alcoholics. AA is frequently the only treatment available in State prisons.

It should be noted that similar criticisms have been made about the quality and quantity of all health care services available to inmates of jails and prisons. To a certain extent, these conditions reflect a more general societal dilemma about how convicted criminals will be dealt with; there is no universal agreement that inmates' chronic alcoholism should be treated during incarceration; legislators are wary of approving funds for such services. Prisons are still primarily custodial institutions designed to protect society by confining and punishing the offender, and treatment programs must be implemented within this framework (Nissen 1973; Smith 1977; Underwood 1976; Weisman 1977).

The trend is away from rehabilitation and back to punishment through the use of fixed, determinate sentences with no good time for participating in treatment (Weisman 1977). Critics of rehabilitation efforts argue that we have been unsuccessful in changing criminal behavior. However, this debate is not truly relevant to the development of alcoholism services; whether the purpose of prison is to modify criminal behavior or to punish, the incarcerated chronic alcoholic should have available adequate treatment for this condition (Boudouris 1979). Another reason for the inattention to developing more treatment services for incarcerated alcoholics has been the recent concentration on developing alternatives to institutionalization through diversion projects and community-based correctional services. These efforts, however, mean that those offenders who are ultimately held in State prisons are more likely to be the severe alcoholics and/or abusers of other drugs who most need such services (Smith 1977).

There are some reservations about the extent to which incarcerated alcoholics actually constitute an authentic subcultural or diagnostic group. Great variety is found in age, severity of prior criminal history, personality, socioeconomic level, and educational background. Length of sentence is a key discriminating variable for prison adjustment. But the prison is generally held to have an inmate subculture with normative demands for conformity and a hierarchical power system among convicts which can interfere with treatment (Nissen 1973). This subculture must be considered in program design. There are those who advocate beginning treatment immediately upon an inmate's admission before he or she succumbs to the demands of the inmate subculture. And there are those who insist that treatment need not begin until

release is imminent and the inmate will need aid in reentry. The inmate subculture generally defines the activities associated with treatment (trust, expressing feelings in a group setting) as inappropriate behavior and advocates conning of the treatment personnel. Often treatment is sought as a means of obtaining parole and early release. Treatment personnel need to be alert to the dynamics of the inmate subculture in working with individuals and in designing interventions.

In addition to recognizing the influence of the inmate subculture on those seen for alcoholism treatment, we must draw distinctions between types of alcoholism when developing treatment programs and individual treatment plans. Schuckit's (1973, 1979b) classification of primary and secondary alcoholics is useful in differentiating the treatment needs of alcoholic inmates. Schuckit distinguishes the two most frequently appearing variations of secondary alcoholism—antisocial personality or sociopathic alcoholism and primary affective disorder or depressive alcoholism. Sociopathic alcoholism involves the onset of alcohol abuse in a person with a preexisting antisocial personality. Correct classification as a sociopathic alcoholic depends on accurate and complete history taking since the differentiation depends on the presence of a history of severe antisocial behavior beginning as a very young child with at least 10 years of such behavior prior to the onset of heavy problem drinking. Treatment of the sociopathic alcoholic is less likely to be successful than that of the primary alcoholic or depressed secondary alcoholic.

It is not known to what extent the population of incarcerated alcoholics will fall into these subtypes. However, it should be anticipated that the majority will be primary alcoholics amenable to treatment. As noted in the *Third Special Report on Alcohol and Health* (U.S. Department of Health, Education, and Welfare 1978), alcohol is implicated in many crimes; however, less is known about the long-term drinking histories of the offenders who may be involved. It is necessary to differentiate in planning correctional treatment programs between those inmates whose alcohol abuse is just another personality (sociopathic alcoholics), those whose criminal behavior is the direct result of their abuse and intoxication (primary alcoholics), and those whose criminal behavior is unrelated to their alcoholism (Diesenhaus 1977). Each group will be differentially responsive to treatment and will require varied treatment regimens.

Efforts to provide treatment in prisons most often reflect an adherence to a combined treatment, chemical dependency or substance abuse model (Senay 1978). In both institutional and community correctional settings, criminal justice referrers do not make the subtle distinctions between alcohol and drug abuse treatment programs that are made by workers in the field, and the criminal justice client is more likely to be a multiple substance abuser who does not fit neatly into program funding categories (Diesenhaus 1977).

Treatment approaches used in correctional settings have varied considerably, including chemotherapy, biofeedback, behavioral man-

agement techniques, therapeutic communities, education and discussion groups, confrontation groups, and self-help groups. Treatment has been conducted in separate specialized units—a cell block or dormitory where the inmates are isolated in varying degrees from the larger institution while in treatment (e.g., the Federal Bureau of Prisons functional unit of 50-100 residents housed together) as well as in separate facilities operated by the corrections department as a treatment program. Most alcoholism treatment is conducted with clients continuing to reside in the general inmate population. They participate in the full range of institutional activities and attend separately scheduled individual and group treatment sessions (Smith 1977).

Alcoholism treatment is conducted either by specialized corrections staff, volunteers coming in on an irregular or regular basis, or community-based agencies contracted with to provide treatment to inmates on a regular basis. It is this latter strategy which the GAO report recommends for increasing treatment availability in State and Federal prisons (Comptroller General 1979). Treatment personnel coming into the prison from the outside, particularly, must be aware of the prison cultures—both administrative and inmate, in order not to be caught in the conflict between treatment and custody (Nissen 1973; Smith 1977). Open communication and cooperation with custodial and administrative staff are necessary if the program is to succeed.

There is general agreement that, whatever the typology used, the heterogeneity of alcoholic inmates in regard to those characteristics related to good prognosis leads to the need for a variety of treatment approaches and settings within the correctional system. There are a number of critical principles to be followed in starting and operating an alcoholism treatment program in a correctional institution (Smith 1977). Some of these are:

- Correctional authorities must understand and genuinely support the alcoholism treatment unit.
- The unit must establish and communicate reasonable and attainable goals which reflect the realities of the correctional setting and do not conflict with those of the overall institution.
- Within the limits inherent in the correctional setting, the treatment program should be voluntary. Clients should be admitted into treatment or allowed to refuse or terminate treatment without such a decision affecting expected parole date.
- Multiple treatment approaches should be offered and potential clients evaluated to determine which pattern of intervention is best suited to their variety of alcoholism.
- Staff of the treatment program must continually exercise proper concern for maintaining institutional security. Open communication should be maintained with correctional staff about mutual concerns.
- Continuity of treatment must be established between institutional programs and community alcoholism treatment programs so that

the gains may be maintained through the transition back to, and subsequent full participation in, the community.

Treating the Physically Impaired Alcoholic

In the last several years, there has been increasing recognition that the physically impaired is a neglected special population, which itself has several subpopulations. Current staff in alcoholism treatment agencies are not emotionally or intellectually prepared to deal with the extreme physical disabilities that some alcoholics may bring to treatment. Each disability group (deaf, blind, cerebral palsy, spinal cord injuries, multiple sclerosis, cancer, amputees, epilepsy, etc.) will bring a unique set of characteristics and problems for the alcoholism counselor to cope with. Current treatment programming is not responsive to the unique needs of these groups. The physically disabled alcoholic is facing a double stigma—the disability and the alcoholism. Yet, they are forced to fit into treatment programs which are designed for the physically normal and which are not yet responsive to their double sets of needs. Barriers to treatment such as physical accessibility, special transportation needs, and counselor attitudes are just recently beginning to be identified and dealt with. Changes required to create a responsive environment go beyond building a wheelchair ramp. Program content, staff attitudes, and manner of presentation must be reexamined and modified (Boros and Hawkes 1979; Watson et al. 1979).

Boros (1979) advocated using Lewin's action research techniques to bring about community services for the physically impaired alcoholic; his own work has focused on the deaf. His strategy can be generalized to other disability groups; it is based on four assumptions: (1) treatment personnel require valid and comprehensive information about the need for new services to disabled clients, (2) treatment personnel will cooperate with the action research effort, (3) treatment personnel will accept outside help in working with disabled clients, and (4) treatment personnel will reallocate their resources to improve programming for disabled alcoholics when the data generated by the research and their own experience convince them of the need.

The intervention strategy itself involves a number of steps: (1) creating community awareness through workshops and publications, (2) obtaining financial support for carrying outreach for disabled alcoholics needing services, (3) collecting baseline data on the number of disabled alcoholics in treatment, (4) conducting outreach using workers who are familiar with both alcoholism and the target disability and who can serve as advocates for the client with agency personnel, (5) training key treatment personnel about what to expect when working with disabled alcoholics, and (6) collecting and analyzing data about the outreach and advocacy efforts. Additional outreach efforts with leaders of the disability group "community," where it exists, may be needed. Data are presented to a second workshop involving the same involved agencies,

organizations, and persons. Workshop participants evaluate the findings and make recommendations on improved, more responsive programing for the disabled. A report is prepared and disseminated, and recommendations are implemented. This model has been applied in developing responsive services for the deaf alcoholic (Watson et al. 1979). For each disability group there will probably be specific program changes needed; analysis of their unique characteristics is needed.

For example, the deaf community is close knit and does not respond to the same media as the hearing community. Trust of the program within the deaf community is needed and personalized outreach is needed to both leaders and organizations as well as to the deaf alcoholic. Hiring personnel who are knowledgeable about deafness and sign language is critical. The counselor must communicate at the patient's level, recognizing that certain abstract words are difficult to sign and that rephrasing is often necessary. Influence leaders or interpreters participating in sessions are important in aiding communication. Deaf patients and hearing patients are integrated in all treatment activities (e.g., didactic sessions) except group therapy. Small groups involving only the deaf should be held to be certain that the material covered is understood. The deaf patient is not able to process the same level of information and requires help in reviewing and understanding.

Variations of the action research method can be used by individual alcoholism treatment agencies in developing more responsive strategies for working with the physically disabled alcoholic. Increasing attention will be paid to their proportionate representation in treatment with the active implementation of sections 503 and 504 of the Rehabilitation Act of 1973.

Treating the Employed Alcoholic

Occupation has also been used to define a special population group for outreach, identification, and treatment purposes. Occupational alcoholism programing has become a major focus because of the opportunities for early identification. Different treatment strategies also need to be used in working with different industries, professions, types of work organizations, and levels within the work force (Beyer and Trice 1978). Different strategies are necessary for reaching and treating the heavily supervised blue-collar, hourly wage earning assembly line worker who punches a time clock and the salaried executive or professor who controls his or her own schedule and work situation. For example, different strategies are advocated for reaching faculty members and nonacademic staff in universities (Roman 1978). For faculty members, and other professionals working in similar settings, the typical job performance deterioration model with supervisors identifying and referring the worker to the employee assistance program does not hold. For other professions such as airline pilots, where their health is closely monitored by the government as well as the employer as a condition of continued active participation, a more complex set of norms and

problems must be dealt with (Gilstrap and Hoover 1977; Gilstrap et al. 1975). Peer referral and aftercare systems are more often used in working with professionals.

Definition of occupations as special populations reflects the recognition that each occupation functions in a cultural milieu shaped by the unique characteristics of its position in the workplace. Treating the employed alcoholic requires recognition of the individual's degree of involvement with the occupational subculture and that subculture's contribution to the etiology and maintenance of alcohol dependence (Roman and Trice 1976). Even though there has been a steadily increasing number of employee assistance programs referring persons to treatment, there are still difficulties in developing effective linkages between EAPs and treatment centers; problems arise because of the failure of these principles to be understood by many treatment personnel (Cloud 1978; Magruder 1978). Each employee assistance program needs to evaluate the effectiveness of the various treatment programs with which it works for the specific client groups which it will refer. Characteristics of the work force being represented will be critical in this evaluation and choice of treatment setting and method (Trice 1979). A union-based program in the garment industry will require affiliation with treatment programs skilled in treating women because of the high number of women factory workers; a treatment program serving commercial pilots will need to be strong in medical documentation as well as alcoholism rehabilitation because of the Federal Aviation Administration requirements.

Roman (1975) identified "the rush to treatment" as a possible danger. Emphasis on referring all identified employed alcoholics to treatment ignores many of the other potential helping devices (e.g., confrontation, education) available without stigmatizing the employee as an alcoholic. As did Trice (1979), Roman questioned the use of detoxification and inpatient care for the early stage employed alcoholic; he wondered whether the treatment programs created to deal with the later stage alcoholic are appropriate placements (Moberg 1976). There is also some indication that differential treatment assignment of employed alcoholics is not related to outcome (Heyman employed alcoholics to inpatient treatment would seem unnecessarily costly and unnecessarily stigmatizing. Efforts have been made to establish outpatient alternatives (Schramm et al. 1978).

The military services represent industries which operate their own referral and treatment networks (Borthwick 1977; Brownell 1978; Duane and Norton 1978; Zuska 1978). Their experiences can serve as valuable indicators of strategies needed. To deal with this problem of restricted treatment options, the Navy developed its Navy Alcohol Safety Action Program (NASAP), originally modeled after the civilian Drinking Driver Alcohol Safety Action Program and expanded to include a wide variety of indexes of deteriorating duty performance (e.g., excessive sick calls, fights, alcohol-related job accidents). The major elements of the multimodality NASAP portion of the Navy's overall

Alcohol and Drug Abuse Prevention Program are, first, the screening of referred clients, and, second, the two levels of service to which the client can be referred depending on the assessed problem (Bunn 1979). Level I is a 36-hour alcohol education program, targeted at the less severe alcohol misuser; AA participation is mandatory. Level II is referral to a medical facility for diagnosis and transfer to a rehabilitation facility for treatment. Other research conducted by the Navy includes evaluation of differential response to treatment for younger and older service personnel, for different grades, and for different occupation groupings.

Each service has its own occupational alcoholism program which includes directly operated alcoholism treatment programs as well as referral and tracking systems. The goal of treatment is to return the alcohol abuser to active duty. As in other alcoholism treatment, abstinence is stressed as leading to improved job performance. Evaluation of treatment, however, stresses improvement on work-related indexes (e.g., number of sick days, number of alcohol-related complaints, number of general medical complaints) (Edwards et al. 1977). Gwinner (1977) described how the social characteristics of the military service community affect treatment; he listed five key characteristics which influence drinking behavior and response to treatment: (1) hierarchical, uniformed, and demanding conformity; (2) paternalism; (3) permissive attitudes to availability of alcohol and excessive drinking; (4) mobility; and (5) relative absence of women.

Similar analyses can be developed for each occupational grouping, as had been done for physicians (Sclare 1979). The questions to be addressed by treatment program designers are: What are the core characteristics of this group and their occupational setting, and how do they facilitate or impede recovery from alcoholism? What will their effect be on the recovery process in a given treatment program?

Treating the Alcoholic Migrant Worker

A high-risk occupational group for which intensive alcoholism treatment services are needed but are only just now beginning to be developed is the migrant and seasonal farm workers (Chatham 1977). In 1978, there were only two NIAAA-funded treatment projects targeted at migrant workers; these projects accounted for only 1,200 (0.5 percent) of the 245,915 persons served, and only 449 (0.7 percent) of the 64,840 intakes with alcohol problems (Ferguson and Kirk 1979). Additional migrant workers were served in funded projects in Florida, Texas, and California, where many of the migrant workers are concentrated. NIAAA project directors from a number of these States recently met to discuss how they could coordinate efforts for those clients who move within the migrant streams from one State and one project to the other.

There are three main streams—the eastern, or Florida, the Midwestern, starting in Texas, and the western, or California. The streams differ in problems posed because the population within the eastern stream is

mostly black and single, and within the two others is mostly Mexican American traveling in extended family groups. The migrant worker occupational group, therefore, is actually two distinct cultural groups.

There are an estimated 200,000 adult workers of whom 25 percent, or 50,000, are estimated to need alcoholism services. Much needs to be done in working with this special population (Chatham 1977). There are still significant barriers to be dealt with. There is denial of the existence of an alcoholism problem by both the migrants and their employers. Alcohol is sometimes used for payment and bonuses; in some areas it is used as a social control technique by growers. Growers need the workers for concentrated periods of time; afterwards the workers are on their own, ready to move on to the next job. There is little motivation for extended treatment.

Traditional alcoholism agencies are not geared to work with the impoverished, culturally isolated migrant farm worker. Specialized migrant health agencies focus on the more acute health needs of this impoverished population and do not yet have staff training in alcoholism counseling. Efforts are currently being made to develop new linkages which will bring the migrant health agencies and alcoholism treatment programs together to develop common strategies for reaching out to the alcoholic migrant workers and motivating them to seek continued rather than emergency treatment like detoxification or repair of alcohol-related trauma injuries.

Concluding Comment

In reviewing the unique treatment needs of each of these special populations and the changes required in treatment programming to accommodate them, it is important not to forget that the usual problem drinker or alcoholic in this country is a socially stable blue-collar or white-collar adult male worker with an intact family (Kissin 1977a; Schuckit 1979a). It is not the intent of this paper to portray that this "special population" is receiving adequate treatment and the other groups are not. While there have been gains in treatment availability, no group is yet receiving adequate treatment. A key indicator of this failure is the ratio of intakes to contacts for NIAAA-funded programs. In 1978, the alcoholism treatment center (ATC) and problem-drinking driver programs (PDDP), which clearly serve that group of more socially stable working class alcoholics with the best prognosis, reported that, for persons with identified alcohol problems, the percentages of contacts receiving an intake are only 41 percent and 53 percent, respectively; the overall percentage for all categorical programs is 48 percent (Ferguson and Kirk 1979). Of those who do not go on to an intake, 34 percent of ATC contacts and only 2.4 percent of PDDP contacts do not receive a referral; overall, the no referral proportion is 22 percent. The bulk of referrals from contact to another helping resource is to AA (44 percent). For ATC and PDDP programs, the referrals to AA are 41 percent and 25 percent, respectively. We cannot know how many referrals actually

followed through on the referral or were appropriately referred; thus, we are left with a large number of potential clients (52 percent) for whom there is no indication that treatment was begun.

Given the lack of resources and the barriers to appropriate treatment imposed by lack of first- and third-party reimbursement availability, we must assume that a sizable number of typical alcoholics are not receiving adequate treatment. Or if they are receiving treatment, it may not be the most appropriate and least expensive.

As this review has indicated, an increasing number of special population groups requiring individualized treatment have been identified. Treatment programs and funding agencies are finding themselves beset by a bewildering array of advocates from different groups seeking changes and additional specialized resources. Some commonalities are emerging—the appreciation of the client's uniqueness in relation to the multiple groups of which he or she is a member and the inclusion of these sociocultural characteristics in designing treatment programs as well as in treatment planning for the individual, greater flexibility and experimentation in treatment programing and goals, and more tolerance of patients' sociocultural differences by treatment personnel.

The same issues and analyses can be presented for the other major special population groups—women, youth, elderly, Native Americans, Hispanic Americans, Asian Americans, and blacks. Religions, also, can contribute to defining treatment needs because of their different norms of drinking behavior (Flanzer 1978). The issues relating specifically to some of these other ethnic groups are discussed in other papers.

There are several common problems which must be identified. First, clinicians must be wary of defining a given client only in terms of his or her special population status; members of these groups vary on other important dimensions such as social status, education, and psychiatric status. In his critique of the literature on black alcoholism, Harper (1979) noted the limitations of available studies on alcohol use among blacks because of the focus on drinking practices of lower class black male Americans. Generalizations about treatment needs for all blacks from this subgroup are inappropriate, and there will be individualized reactions to treatment within the black special population; the result will be differential outcomes (Linn et al. 1979).

Second, being culturally sensitive and flexible is necessary when the therapist and the client are from different cultures. However, arguments about the appropriate interpretation of cultural factors in relation to alcoholism are common (Leland 1979; Popham 1979). In order to avoid such conflicts, clinicians may need to make room for the "native healing system" of the client's culture to be brought into the treatment process as an equal participant (Miller 1978; Watson et al. 1979).

Third, a factor involved in underutilization of treatment facilities by special population groups is the lack of means to pay for treatment. For example, in a sample of people calling a referral service in New York City, Fischer (1978a) reported that blacks and Hispanics were less likely to have insurance coverage for alcoholism treatment. This lack of

coverage influenced the nature of the referral made. In planning for new or modified culturally appropriate programs, the inability of minorities and other special populations to rely on third-party payment must be taken into consideration (Newman et al. 1978).

Additional studies on how to make treatment programs more relevant are needed, like that conducted by Wanberg et al. (1978), which compared alcohol use patterns in American Indian, black, Hispanic, and white groups treated within a single State hospital treatment program. These researchers were able to develop some recommendations for the specialized treatment approaches which may be appropriate for each of these special populations as they participate in the larger program. They found important differences on both sociodemographic and drinking pattern variables. All four groups reflected significant social disruption, but American Indian and Hispanic alcoholics were more likely to manifest greater disruption in vocational and economic areas, suggesting the need for greater referral to assistance services for these two groups, or for developing specialized, culturally sensitive assistance programs for them within the overall program.

The instrument used to measure drinking patterns was the Alcohol Use Inventory (AUI), which comprises 22 scales measuring alcohol use benefits, styles, affective associations, and symptoms. Significant differences among the four groups were found for several scales measuring drinking style; no differences were found for drinking benefits, affective associations, or symptoms. American Indians and Hispanics were found to have a greater tendency than whites to drink in gregarious, convivial settings such as bars and in peer groups. This finding suggested that nontraditional group therapy experiences led by peer counselors may be more effective with the gregarious, convivial Indians and Hispanics. Whites, in contrast, may benefit from more solo treatment activities. Again, some specialized treatment programming would be possible within the larger unit. The findings of no differences among the four ethnic groups on other AUI scales suggest that common treatment approaches can be used in dealing with the benefits derived from using alcohol.

These authors concluded that a program's staff can include specialists who are trained in the cultural background of the various special populations which can be expected to enter the program and who can act in an advocacy role for all clients as treatment plans are developed to allow them to receive the alcoholism treatment, social services, and vocational training appropriate to their cultural needs and drinking patterns.

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Chapter 9

Alcoholism Treatment Outcome Evaluation Methodology

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Abstract

Treatment outcome evaluation studies are intended to identify effective treatments, as well as to differentiate what treatments work most effectively and efficiently for different kinds of people. Unfortunately, at present little can be said about the effectiveness of most treatments, as treatment outcome studies have been fraught with methodological and conceptual problems. Most treatment outcome studies have been so poorly designed and implemented that their aggregate findings are rendered virtually useless. One of the major problems related to assessing and interpreting treatment effectiveness is a serious lack of comparability among studies—there is little, if any, standardization of methodology across studies. In this paper a set of minimum criteria are proposed for use in treatment outcome studies. These criteria are then used to critically review treatment outcome studies published during the last 4 years. The studies reviewed demonstrated considerable methodological advancement over studies published prior to 1975. However, this promising finding must be tempered accordingly, as many of the studies reviewed still did not meet several of the methodological criteria. Finally, it is suggested that the responsibility for establishing and enforcing a set of minimum criteria for assessing alcohol treatment studies rests with those funding or publishing such studies.

Introduction

In relation to other health problems, the alcohol field has sorely lacked controlled treatment investigations. Until recently, most of our knowledge about alcohol problems and their treatment came from popular views derived from the only available sources: the life experiences of persons with alcohol problems and the clinical experiences of those who dealt with these people. These views and the beliefs upon which they are based have been described as the traditional concepts of alcoholism (Pattison et al. 1977). For many years, they have served as the basis for the treatment of alcohol abusers. Over the past 2 decades, however, scientific research not only has produced substantial increases in our knowledge of alcohol

problems but also has fostered the development of new treatments. Nevertheless, while numerous alcohol treatments and programs exist, at present there is no demonstrated effective treatment.

Outcome evaluations of alcohol treatment are needed to assess the effectiveness of programs and techniques developed to treat individuals with alcohol problems. Treatment outcome evaluations are intended not only to identify effective treatments but, more important, to determine which treatments work most effectively and efficiently with different kinds of people. Presently, we do not know what treatments work best for what individuals. Ideally, treatment outcome studies will lead to the development of a differential model of treatment that can serve as the basis for identifying maximally efficient, minimally intrusive, cost-effective treatments for individuals with alcohol problems. This paper presents a critical review of treatment outcome studies conducted from 1976 to 1980, evaluates the state of the art in alcohol treatment outcome evaluation, and addresses future needs in this area.

Historical Overview

Between 1942 and 1977, four excellent critiques were published evaluating the then current state of the art of alcohol treatment outcome evaluation (Crawford and Chalupsky 1977; Hill and Blane 1967; Miller et al. 1970; Voegtlin and Lemere 1942). A detailed review of these critiques has been published elsewhere (L. C. Sobell 1978). The consensus of the articles was that little methodological progress occurred between 1942 and 1977. Another unfortunate conclusion that can now be drawn from these critiques is that, throughout the years, few researchers took heed of the repeated identification of problems regarding the definition, measurement, and evaluation of alcohol treatment.

The most alarming finding of these four critiques, which evaluated more than 200 articles spanning a period of 36 years, was that their reviews called into question the validity, and thus the value, of most published studies of alcohol treatment. Needless to say, since publication has typically been limited to those studies that have satisfied a critical peer review, the area of alcohol treatment outcome evaluation would undoubtedly be judged even more deficient if the countless unpublished reports were also evaluated.

In summary, a review of the state of the art through 1977 suggested that the evaluation methods and techniques that had been used were usually not adequate to justify conclusions about treatment outcomes, thus leaving the effectiveness of alcohol treatment undocumented. The major collective contribution of these critiques was in their communication that in order to learn about the effectiveness of alcohol treatments, refinements and innovations were sorely needed in the area of treatment outcome evaluation.

Although several reviews have clearly documented that alcohol treatment outcome evaluation studies have been methodologically weak and empirically unsound, recent reviews have similarly critiqued both the drug abuse (Maisto and Cooper 1980) and mental health fields (Hadley and Strupp 1977). Thus, the alcohol field does not seem to be alone in its lack of adequate treatment outcome methods and measures.

Recent significant improvements in treatment outcome evaluation methodology have occurred. Three major factors have influenced these changes. The first major factor was the emergence of behaviorally oriented treatments for individuals who have alcohol problems. Behavioral treatments have their roots in a scientific orientation that demands operational definition and measurement of the behaviors under study. Thus, researchers in this area have sought to define and quantify drinking behavior as they would any other behavior.

The second major factor was reports of nonproblem drinking outcomes. This unorthodox treatment goal (sometimes labeled "controlled drinking") made necessary the development of more sensitive and valid treatment outcome measures (e.g., amount of ethanol consumed per day, breath tests for alcohol, liver function tests for assessment of recent heavy drinking). At this point, it is important to note that, while a daily drinking disposition measure (M. B. Sobell and L. C. Sobell 1973) was originally developed to assess the effectiveness of a nonproblem drinking goal, this type of measurement has subsequently allowed for more precise quantification of drinking in the evaluation of all alcohol treatments.

The third major factor was the finding of differential patterns of outcome with different populations of alcohol abusers (Glaser 1980; Pattison 1974; Pattison et al. 1977). Essentially different populations of alcohol abusers have been found to have different patterns of pretreatment functioning as well as different patterns of posttreatment gains. Moreover, though some individuals who drink excessively have shown no immediate drinking-related life health dysfunction, it is also the case that some totally abstinent alcoholics have not demonstrated corresponding improvements in other areas of life health and have even evidenced deterioration (Pattison 1978). These findings suggest that multiple-outcome measures are needed to evaluate alcohol treatment programs.

The three factors just described have also precipitated notable changes in treatment outcome followup procedures. For example, considerable and continuing attention has been focused on the need for an adequate length of followup, such that the data collected reflect stable functioning. Further, one behavioral treatment study, in particular (L. C. Sobell and M. B. Sobell in press, M. B. Sobell and L. C. Sobell 1973, 1976, 1978), has demonstrated the value of conducting multiple followup assessments (vs. a one-time followup contact) and using a comprehensive battery of followup tracking techniques. This and other

studies have shown that when evaluations and followup are planned in advance, relatively complete and comprehensive data can be obtained.

Before reviewing the published treatment outcome literature for the interval 1976 through 1980, we will address several methodological issues. In the following section, these issues are considered in the formulation of a set of criteria that studies should satisfy for their findings to be considered valid.

Criteria for Treatment Outcome Evaluations

Need for Comparability

In order to synthesize findings across studies, the establishment of some basic criteria for all alcohol treatment outcome studies are necessary. Presently, standardized procedures and measures do not exist for assessing either drinking behavior or other areas of life health functioning (Maisto and McCollam 1980). The typical way drinking and other treatment outcome dimensions are defined and measured is within the context of the particular study presented. Thus, outcome measures are often idiosyncratic to a given study. Although complete standardization of outcome assessments may be unreasonable, until some agreement is reached on types of outcome measures and techniques, there will remain a serious lack of comparability among studies.

To begin with, it is suggested that, as a minimum, all studies of alcohol treatment should include a basic assessment of drinking behavior and associated life health functioning (e.g., vocational, cognitive, social, familial), using measures that conform to the following psychometric characteristics: (1) operationally defined; (2) quantified, and continuous, if possible; (3) reliable; and (4) valid, as well as can be demonstrated. Because not everyone will agree that all the proposed criteria are necessary, justification for the criteria are provided. Finally, for reference the proposed criteria are listed in table 1.

As will be seen shortly, the review of recent treatment outcome studies, though they are few in number, will clearly demonstrate that scientifically sound outcome studies can be performed. Considering the state of the art in the treatment of alcohol problems, coupled with the recent serious challenges that treatment per se or type of treatment may make no noticeable difference (Armor et al. 1978; Edwards, Orford, Egert, Guthrie, Hawker, Hensman, Mitcheson, Oppenheimer, and Taylor 1977; Emrick 1974, 1975), it is imperative that clinical research studies be well designed.

Table 1. Criteria for Treatment Outcome Evaluation

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1. Plan evaluation prior to the study
 2. Operationally define:
 - a. Subject populations
 - b. Treatments
 - c. Outcome measures
 3. Obtain representative assessments of pretreatment functioning
 4. Obtain comprehensive followup tracking information
 5. Use outcome measures of known reliability and validity
 6. Use multiple measures of treatment outcome that are continuous and quantifiable whenever possible
 7. Use multiple information sources to verify subjects' self-reports
 8. Only interview subjects when they are alcohol-free
 9. Use multiple followup contacts
 10. Use minimum 12- to 18-month followup interval
 11. Use appropriate statistical analyses:
 - a. Advanced techniques
 - b. Control for pretreatment differences
 - c. Analyze for predictors of treatment outcomes
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Definitions and Types of Measures

One serious problem in trying to compare and integrate findings across treatment outcome studies is that investigators often describe their procedures and measures in vague terms and sometimes fail to describe them at all. The importance of adequate definitions is not limited to outcome measures but also includes an adequate description of the subject population under study and the treatment components and processes. If the subjects, treatment, and resultant findings are not adequately described, then replication of a study is impossible. Similarly, without adequate definition, the generalizability of a given study's findings to other populations and treatments can only be speculative.

Defining the population under study is critical to the interpretation of results as well as the generalization of findings. This is particularly important because until very recently the majority of alcohol treatment studies primarily involved chronic or *gamma* male alcoholics (Jellinek 1960). In recent years, though, there has been an increasing emphasis on providing and evaluating services for less debilitated or otherwise different populations of alcohol abusers (e.g., problem drinkers, women, young people, minorities). It is suggested that, as a minimum, each

study should specify the following population characteristics: age, sex, ethnicity, education, marital status, socioeconomic status, vocational status, length of drinking problem, presence or absence of physical dependence on alcohol, referral source, number of alcohol-related arrests and hospitalizations, and extent of prior treatment for alcohol problems. Specification of these parameters would clearly help to delimit the generalizability of a study's findings.

In addition to satisfactory descriptions of the populations under study, it is equally important to specify the nature of the treatment(s) delivered. Identifying, reporting, and preferably measuring all known treatment components are essential to knowing what factors might have contributed to a subject's improvement, lack of change, or deterioration. Treatment studies should at least specify type of treatment, amount and length of treatment, and training and sex of therapists. Though some treatment factors are relatively easy to quantify, less specific treatment factors, such as rapport or motivation, should not be ignored, even though they might be somewhat more difficult to define and measure.

As noted earlier, traditional concepts of alcohol dependence have greatly influenced and guided treatment procedures. Similarly, they have influenced the way treatment has been evaluated. Traditional concepts convey specific implications for treatment goals and for ways of measuring drinking outcomes. For example, because outcomes of nonproblem drinking cannot be envisioned by traditionalists, drinking behavior has most often been measured as a dichotomous entity: abstinent or drinking, with drinking defined as consumption of any ethanol. This type of assessment allows only for black and white portrayals of drinking and, in so doing, assumes an all-or-none recovery phenomenon. Still another way of measuring drinking outcomes has been to use nominal categories (e.g., "improved," "same," or "worse"). The major problem with this type of measurement is that it may be seriously biased by variable temporal reference points (e.g., what is evaluated as improved on one occasion may be evaluated as worse or unchanged on another occasion). Further, unless nominal categories are clearly operationalized, different definitions of improvement are likely to be used. Since a number of studies have found that only a small percentage of alcohol abusers remain continually abstinent over long periods following treatment, an improved way of measuring drinking behavior is to operationally define drinking as a continuous and quantifiable behavior; for instance, the number of ounces of ethanol consumed per day.

In addition to measuring any drinking that occurs, the outcome dimension of drinking can be considered to include other components presumably related to the future likelihood of drinking. For example, investigators could measure alcohol abusers' preoccupation of cognitive fixation with alcohol. The potential importance of measuring these related aspects of drinking behavior is illustrated in the following example. People who, out of fear, regularly structure their daily living (e.g., never going to a party, avoiding all places that sell alcohol) to

avoid contact with alcohol might be considered to be preoccupied with a possible return to drinking, and, consequently, to be at risk of resuming problem drinking. Such behavior could easily be assessed by having people keep track of or recall the number of situations they purposefully avoided because alcohol was available, or by their counting the number of alcohol-related thoughts or urges that occur each day. Such information could also be used in studying the antecedents of a relapse.

Investigators might also consider assessing the actual consequences of *any* drinking. The significance of evaluating the consequences of drinking relates to the fact that in some cases the actual amount of ethanol consumed may not be evaluated as dysfunctional, although the real or potential consequences of the drinking may be quite serious, or at least considered high risk. For instance, consider a 100-pound person who drinks only four drinks (1/2 ounce pure ethanol each) within 1 hour and then drives. In most States, this person would probably be considered legally drunk, and, if stopped by the police, arrested for drunk driving. Further, consider an individual who has just one drink with a meal. If the person's spouse adamantly objects to any and all drinking, and the drinking leads to marital discord, the consequences obviously may far exceed the otherwise harmless physical impact of one drink. Thus, it would be valuable to know the consequences of people's drinking, in addition to how much they drink.

Alcohol, as a central nervous system depressant, can have an acute effect on cognitive functioning. In fact, studies have shown that many chronic alcoholics and some problem drinkers exhibit varying degrees of clinical and subclinical brain damage probably related to excessive ethanol consumption (Fine and Steer 1979; Freund 1976). Given these findings, it seems necessary to assess subjects' cognitive functioning and evaluate posttreatment changes in neuropsychological functioning as related to drinking.

Finally, besides assessing alcohol consumption, researchers should measure all other drug use, prescribed and nonprescribed. This information is important for two reasons. First, since alcohol is synergistic with many drugs, it may have more serious consequences when used in combination with other drugs. Second, when alcohol consumption is significantly reduced or eliminated, it is important to know whether other drug use or abuse is occurring.

Although measuring drinking behavior may be quintessential to any alcohol treatment outcome study, drinking is usually not the only behavior affected when an individual abuses alcohol. Also, change (gains or losses) in one area of life health does not necessarily imply or predict related changes in other areas of life health (Pattison 1978). Since the late 1960s, investigators (Gerard and Saenger 1966; Pattison et al. 1968) have emphasized the need for a multivariate evaluation of alcohol treatment effectiveness. One distinct advantage of using multiple measures is that relationships of posttreatment changes in drinking behavior can be evaluated in the context of other possible changes occurring in a person's life. It is also important to know the

temporal relationships between various aspects of treatment outcome. For example, do changes in drinking behavior precede or follow changes in interpersonal functioning, and do different types of subject populations show different patterns of change?

In a recent review, Maisto and McCollam (1980) concluded that a majority of alcohol treatment outcome studies now use several outcome measures in their evaluations. However, they also found that those studies which used multiple measures showed tremendous variability in the types, number, definition, and quantification of variables used.

Like drinking behavior, other measures of life health functioning can and should be quantified and scaled whenever possible. For example, measuring vocational stability using the number of days employed full time and the amount of money earned per month, as opposed to nominal categories of improved, same or worse, allows for a more sensitive and precise analysis of change in vocational status.

Some indexes of treatment outcome, while easily measured, are not easily interpreted. For instance, when assessing change in marital status, should divorces be considered good or bad outcomes? Does long-term continued attendance at Alcoholics Anonymous meetings after hospital discharge demonstrate successful functioning or a dependence on that group to maintain functioning? The answers to these questions are, of course, debatable and subject to different clinical interpretations. In these and similar instances, it is advantageous to collect and report complete data. Thus, while investigators may infer certain conclusions from their data, by reading complete reports, others can decide whether or not they agree with the stated conclusions.

In summary, it should be clear that there is a need to operationally define all subject, treatment, and outcome measures. Operational definitions not only increase measurement precision but also decrease the chance of subjective bias clouding the interpretation of results.

Reliability and Validity of Measures

For years, the validity of alcohol abusers' self-reports has been questioned, premised on the belief that they lie or distort their reports to portray their functioning more positively than is actually the case. Only over the last few years, however, has there been a concerted effort to empirically assess the reliability and validity of alcohol abusers' self-reports (Cooper et al. 1981, in press; Maisto, Sobell, Cooper, and Sobell 1979; Maisto, Sobell, and Sobell 1979; L. C. Sobell 1976; L. C. Sobell and M. B. Sobell 1975, 1978; L. C. Sobell et al. 1979; M. B. Sobell et al. 1974, 1979). Collectively, these studies have demonstrated that various populations of alcohol abusers usually report their drinking and related behavior (e.g., arrests, hospitalization, probation) reliably and validly when they are interviewed in a clinical treatment setting and when they are alcohol-free. The one instance when alcohol abusers' self-reports of drinking tend to be invalid and underestimated is when they have a

positive blood alcohol level while being questioned about their recent drinking behavior (Jalazo et al. 1978; Orrego et al. 1979; M. B. Sobell et al. 1979). Importantly, when the self-reports of alcohol abusers who have not been drinking are discrepant with other data sources, it is usually because the subjects have described themselves in more negative terms (subjects report more arrests or more serious drinking problems) than either official records (L. C. Sobell and M. B. Sobell 1975, 1978; M. B. Sobell et al. 1974) or their collaterals' reports (Guze et al. 1963; Maisto, Sobell, and Sobell 1979; McCrady et al. 1978; Miller et al. 1979; Polich, Armor, and Braiker 1980).

Recently, investigators have begun to use various physiological measures to assess drinking and its possible consequences. A variety of breath testers are now available for accurately assessing blood alcohol levels. As one way of examining the validity of self-reports of drinking behavior, some treatment outcome studies have used in-field breath alcohol tests on a probe day basis (Miller 1975; Polich, Armor, and Braiker 1980; Pomerleau et al. 1978; M. B. Sobell et al. 1980). Breath tests, however, can only indicate whether or not drinking has occurred within several hours prior to the test. Thus, investigators have also started to use liver function tests to assess recent (within a few weeks of the interview) episodes of heavy drinking (Pomerleau et al. 1978; M. B. Sobell et al. 1980). In one such study with outpatient alcohol abusers, Pomerleau et al. (1978) reported that subjects' gamma-glutamyl transpeptidase (GGTP) levels correlated significantly with their self-reported drinking: the greater the subjects' reports of drinking, the higher their enzyme levels. It must be cautioned, though, that liver function tests cannot precisely verify or assess drinking behavior that has occurred over long periods prior to the interview.

Urine tests can also be used as a physiological measure indicating the presence or absence of alcohol or other drugs in the body. Again, for followup purposes, urine screens have the same limitation as breath alcohol tests—they can only be used to verify very recent drug use.

The most important criterion to be satisfied by treatment outcome measures is that the results obtained validly reflect behavior in the natural environment. Therefore, it is imperative that any outcome measure or assessment technique fulfill the basic scientific criteria of reliability and validity. Unfortunately, however, no single outcome measure, in isolation, has yet been found to be error free. Thus, it has been suggested that investigators use a *convergent validity* approach when evaluating drinking and related behaviors for followup (L. C. Sobell and M. B. Sobell 1980). With this approach, the strength of a study's conclusions is directly related to the amount of convergence among multiple outcome indicators. This means that the evaluation of treatment effectiveness should be based on data derived from as many sources as possible, including (a) subjects' self-reports; (b) multiple collateral informants' reports, from both primary and secondary sources (e.g., primary—relatives, spouses, employers, friends; secondary—probation officers, neighbors, welfare, treatment, and other social service

agencies); (c) in-field probe breath alcohol tests; (d) official records to verify reports of arrests, employment (e.g., paycheck stubs), hospitalizations, driving infractions, disabilities, marriages, divorces, deaths; (e) periodic liver function tests to assess recent episodes of heavy drinking; (f) psychological tests for brain damage related to ethanol consumption; and (g) any other measures relevant to a specific study.

In stressing the use of a convergent validity model for alcohol treatment outcome evaluation, L. C. Sobell and M. B. Sobell (1980) stated that "when a variety of relatively independent measures are employed and are mutually corroborative, evaluators can have confidence in the validity of their outcome conclusions" (p. 182). Additionally, discrepancies between information sources can be identified when multiple sources of outcome data are used. A very good, recent example of convergent validation of outcome data was presented by Polich and his colleagues (Polich, Armor, and Braiker 1980; Polich, Armor, and Braiker 1981), who used breath alcohol tests, official records, and collateral interviews to help verify subjects' self-reports of drinking behavior.

Methodological Requirements and Considerations

Another set of issues related to criteria for treatment outcome evaluations involves methodological requirements and considerations for planning, conducting, and assessing the treatment study. One of the most important criteria for any treatment outcome study relates to the design of the study. As will be noted later in this paper, a review of studies published over the last 4 years indicates that less than half of them attempted to control or account for subjects' pretreatment status. Until studies either randomly assign subjects to treatment or control for differential pretreatment levels of impairment by matching subjects across treatment groups on a number of pretreatment parameters, the utility of outcome findings will be limited.

As should be obvious, planned assessments have several clear advantages over retrospective assessments: (a) identifying and avoiding possible problems during the planning stage; (b) informing subjects about the followup before it begins; (c) requesting subjects' continued and full compliance with followup over a long period of time; (d) obtaining vital tracking information (e.g., addresses, phone numbers, collateral contacts); (e) explaining to subjects the confidentiality of followup information; and (f) obtaining necessary releases so that subjects can be properly tracked and pertinent information obtained. When the followup has been planned in advance, most investigators who have conducted large-scale long-term treatment outcome evaluation projects have not reported problems or ethical dilemmas in obtaining followup information. A final planning consideration involves providing adequate training and practice for followup evaluators.

The studies reporting the highest percentage of subjects found for followup have also had planned evaluations (Ersner-Hershfield et al.

1979; Moos and Bliss 1978; M. B. Sobell and L. C. Sobell 1976, 1978). Further, investigators who have pursued subjects lost in the first round of followup have found that those subjects are typically functioning worse than those subjects initially found (Barr et al. 1973; Moos and Bliss 1978; M. B. Sobell and L. C. Sobell 1978). This means that studies presenting followup data for only a portion of their entire sample are likely to reach positively biased conclusions, since the outcome data will be derived primarily from the better functioning subjects.

Moos and Bliss (1978) also found that there are varying degrees of difficulty in following up different populations of alcohol abusers. In addition to finding that hard to locate subjects were functioning worse than those initially found, they extended this conclusion to subjects who were less than fully cooperative with the followup. In this same study, the authors reported finding no differences in background characteristics between subjects who were found for followup and those who were lost. The significance here is that investigators, upon finding no differences in sociodemographic pretreatment characteristics between those subjects found and those lost, have often concluded that treatment outcome for the sample found is probably representative of what the outcome would be if the entire sample had been interviewed. However, the findings of Moos and Bliss suggest that, despite the lack of pretreatment differences, subjects found and subjects lost might have different treatment outcomes. Given the above, it is clear that followup attrition must be minimized if valid and unbiased outcome conclusions are to be obtained.

A final methodological issue relates to the frequency of data collection in followup. Multiple followup assessments have been rare; typically, outcome data have been gathered through a single interview conducted months or years after the completion of treatment. Two serious problems occur when a single interview is used to collect outcome data. First, locating subjects after an extended posttreatment interval is not only quite difficult but, as mentioned earlier, results in high subject attrition, which in turn positively biases outcome conclusions. Second, subjects have difficulty accurately recalling events and behaviors occurring over long time intervals. An alternative to a single followup contact is multiple followup assessments conducted at regular intervals throughout the followup period. The few studies that have used frequent, multiple followup assessments have obtained data for a remarkably high percentage of subjects (Ersner-Hershfield et al. 1979; M. B. Sobell and L. C. Sobell 1976, 1978). Frequent followup contacts also avoid some memory problems because information is gathered about a shorter time interval.

Comprehensive Pretreatment Measures

There are four major advantages to obtaining comprehensive pretreatment data. First, as mentioned earlier, a battery of measures can clearly define the subject population. Second, multiple pretreatment

measures can be used to assess differential levels of pretreatment impairment. Because some populations start treatment with very different levels of functioning than others, pretreatment measures can be used to control for basement and/or ceiling effects (e.g., the amount of possible change may be limited) resulting from pretreatment status. Third, pretreatment data can be compared with posttreatment data to assess amount of change over treatment groups, as well as individual change. Finally, through statistical measures such as multiple regression analysis and discriminant function analysis, a host of pretreatment measures can be used to determine factors that relate to subjects' successful posttreatment functioning. Such information can then be used in future studies to assign subjects to different treatments based on empirical data rather than clinical judgments.

Criterion Intervals

For what interval should pretreatment and posttreatment data be gathered? A recent study (Cooper et al. 1980) showed that a retrospective interval of 12 months is needed to adequately evaluate the pretreatment drinking behavior of some alcohol abusers. Cooper et al. (1980) found that a 30-day pretreatment interval was not representative of the drinking behavior of chronic alcoholics. However, this study also found that, for less chronic alcohol abusers, data representing a 30-day pretreatment interval differed little from data for longer pretreatment intervals. Since these findings are relevant to the measure of daily drinking behavior and do not reflect the adequacy of pretreatment intervals for other types of life health variables, it is suggested that pretreatment data represent an interval of at least 12 months.

Over the past several years, the results of several studies have suggested that 12 to 18 months is a minimally adequate time interval over which posttreatment data must be gathered in order to reflect stable functioning (Caddy et al. 1978; Davies et al. 1956; Gerard and Saenger 1959; Gibbins and Armstrong 1957; Maisto et al. 1980; Orford, Oppenheimer, and Edwards 1976). The findings from these studies indicate that after 12 to 18 months there is very little change in group data (while the data remain stable for groups of subjects, data for individual subjects continue to show some variability even after 12 to 18 months). Prior to the 12- to 18-month interval, however, changes in group data are frequent. Although there is some disagreement about the adequacy of a 12- to 18-month interval, it should be noted that very few studies have reported a followup longer than 24 months.

A final issue regarding intervals involves the evaluation of outpatient alcohol treatment programs. Unlike the hospital setting where treatment is usually completed within a specified time period and there is a precise discharge date, outpatient treatment has typically not been time limited. Consequently, it is more difficult to determine a specific discharge date and when followup should commence. Since the primary question is how people's lives change once they enter treatment, it is suggested

that followup of outpatients commence immediately following treatment entry. In this way, followup data can also be used to determine what types of treatment and extratreatment factors interfere with or expedite treatment gains. In turn, this information can be used to provide data about how treatment might be modified in relation to these factors. For inpatients, however, such a procedure is not practical because they are removed from their natural environment. In such cases, a more reasonable onset of followup would be from the time of discharge from inpatient care.

Population Differences

Typically, studies in the alcohol field have presented outcome or assessment data for a single population of alcohol abusers. Consequently, the conclusions of these studies must be tempered with cautions that their results may not generalize to other populations of alcohol abusers. Though few in number, some studies have reported differential findings when multiple populations have been studied. Specifically, these studies have shown that different populations of alcohol abusers (1) exhibit different patterns of outcome (Hart and Stueland 1979; Moos and Bliss 1978; Pattison et al. 1973; Schmidt et al. 1968); (2) require different followup strategies (Moos and Bliss 1978); (3) give slightly different degrees of reliable and valid self-reports (Cooper et al. 1980; Maisto, Sobell, Cooper, and Sobell 1979; L. C. Sobell and M. B. Sobell 1978); (4) may show different directions of invalidity when self-reports are invalid (Cooper et al. 1980); and (5) start treatment with different levels of pretreatment impairment (Maisto, Sobell, Cooper, and Sobell 1979; Pattison et al. 1973). From the foregoing, it seems clear that, when possible, investigators should use multiple populations of alcohol abusers and limit their generalizations to the populations studied.

Analysis and Interpretations of Outcome Results

Treatment outcome data can be statistically analyzed in a variety of ways if the measures have been well defined and, especially, if they are scaled rather than categorical. Thus, in addition to helping answer the general question of whether or not a given treatment has been

effective, statistical methods can also suggest which treatment components and pretreatment factors are most related to various outcomes. Further, studies often gather treatment outcome data for a set of measures (e.g., drinking behavior, emotional adjustment, interpersonal behavior, vocational functioning) that are not independent of one another. Multivariate statistical methods (Cook and Campbell 1979; Kerlinger and Pedhazur 1973; Tatsuoaka 1971) are particularly appropriate for elucidating complex relationships in such outcome data. Multivariate analyses, incorporating multiple dependent as well as independent variables, are consistent with the view that different individuals are likely to manifest different types of alcohol problems, respond to different sorts of treatments, and demonstrate different patterns of recovery (Pattison et al. 1977).

With appropriate definition and measurement, a given set of outcome data can be analyzed on several levels. First, overall conclusions about treatment efficacy can be formulated based on aggregate data. Advanced statistical techniques can be of use in accounting for known pretreatment differences between groups. Second, provided that followup data are gathered on the same individuals at more than one time, temporal patterns of recovery can be investigated. Third, the relationship of various treatment factors to outcome can be examined (e.g., how does the amount of treatment affect outcome?). Fourth, multivariate techniques can be used to identify pretreatment factors (e.g., characteristics of the clients, referral sources) that are predictive of various outcomes. Finally, at the most comprehensive level, multivariate analysis can examine the varied interactions between pretreatment factors, treatment factors, and outcomes, shedding light on the apparent contribution of these factors to the final outcome. Several recent treatment outcome studies have used multivariate analysis (Bromet and Moos 1977; Bromet et al. 1977; Cronkite and Moos 1978; McCrady et al. 1978; Moos and Bliss 1978; Polich, Armor, and Braiker 1981; Vannicelli 1978); however, with the exception of one study (Polich, Armor, and Braiker 1980; Polich, Armor, and Braiker 1981), the length of followup for which data were reported has been insufficient to assume that outcome results are stable. Thus, while the analysis are valid, one cannot be sure how much relevance the findings of these studies would have predicting long-term outcomes.

To some extent, the interpretation of outcome results is independent from statistical considerations. Statistical methods can indicate the probability that an observed difference between groups is a real rather than a chance finding, but they cannot determine whether the difference is important. Two issues regarding the interpretation of outcomes deserve mention. First, too often, only the results of statistical tests of

significance are reported. It is preferable to report individual and group data in addition to the results of statistical tests. In this way, the reader can gain a clear understanding of the nature of outcomes across individuals. Second, statistical analyses sometimes have practical limitations (Meehl 1954) in that, with large groups of subjects, findings may be statistically significant even though the real difference between groups is rather small. Thus, although the analysis may indicate a difference between treatment groups and methods, the small gain in outcome may not justify the increased effort necessary to generate that gain. Though there are no absolute guidelines for interpreting treatment outcome results, a familiarity with the strengths and pitfalls of statistical methods can be helpful.

The State of the Art

This section reviews the state of the art of alcohol treatment outcome evaluation. The last such review, by Crawford and Chalupsky (1977), covered the years from 1968 through 1971. The present review is based on peer-reviewed publications of alcohol treatment outcome evaluations that appeared in the literature during the period from 1976 through early 1980. Besides appearing in a peer-reviewed publication, a study had to meet four other criteria to be included here: (a) no primary care or detoxification studies were included; (b) subjects had to have a primary diagnosis of alcohol abuse; (c) no case studies were included; and (d) the study had to report a minimum (or group mean) of 12 months of treatment outcome data. Several outcome studies were described in more than one publication; in such cases only the most comprehensive report is included here.

Comprehensive computer searches of the published literature indicated that 37 studies (there were 36 published articles, but 1 reported entirely separate outcome findings for two populations) met the criteria for inclusion in this review. Since this review was conducted in the early part of 1980, only 1 study from that year met the inclusion criteria. The publication dates of the studies for the other 4 years were as follows: 1976—35.1 percent; 1977—18.9 percent; 1978—29.7 percent; 1979—13.8 percent.

The criteria chosen for determining inclusion of studies in this review were restricted so as to include only those studies that reported on the effectiveness of treatments aimed at achieving long-term behavior changes in people with drinking problems. The studies will be discussed

in relation to their concordance with the proposed outcome criteria. Strengths, weaknesses, and innovations of the studies will also be elaborated. As with previous reviews of alcohol treatment outcome studies, this review selected for examination several methodological criteria that have clear importance for treatment outcome studies. Each study was evaluated along the following methodological dimensions: treatment description and orientation; staff characteristics; treatment attrition; pretreatment assessment; the number and types of information sources used for obtaining outcome data; whether drinking behavior outcomes were assessed and whether the assessment differentially evaluated drinking (e.g., measured the amount of ethanol consumed); the number and types of other treatment outcome measures reported; description of the pretreatment sociodemographic and alcohol history characteristics of the subject population; mention of whether subjects were intoxicated when interviewed; characteristics of the followup—the interval represented by the data (in months), the percentage of subjects found for followup, whether equal followup intervals were reported for all subjects, and the number of followup contacts; the highest level of statistical analysis used to evaluate the outcome data; whether pretreatment status of subjects was controlled or accounted for prior to the study; and whether the analysis included an examination of pretreatment and/or treatment predictor variables.

The discussion of the studies reviewed is based primarily on aggregate data. Table 2, which summarizes several methodological characteristics for each of the 37 studies reviewed, allows the reader to compare and evaluate the individual studies.

A total of 6,534 subjects were included in the studies reviewed (one study failed to report the number of subjects). Based on 35 of the studies, the cumulative proportions for subjects by sex were 88.9 percent males and 11.1 percent females. Interestingly, these figures closely parallel national figures for sex distribution in alcohol treatment programs (U.S. Department of Health, Education, and Welfare 1978).

All of the studies were assessed with respect to five different treatment characteristics. Of the 36 studies that mentioned treatment setting, 63.9 percent were inpatient, 19.4 percent were outpatient, and 16.7 percent included both inpatient and outpatient treatments. Of the 32 studies where therapeutic orientation was described, the two major modalities were eclectic/multi-modal, (37.5 percent, $n = 12$) and behavior therapy (25 percent, $n = 8$). Even though most studies mentioned the type of treatment, 27 percent failed to describe further the specific amount of treatment (e.g., number of sessions, number of days in treatment). Historically, attrition, both before and during treatment, has been a serious problem, and many studies have neglected to present attrition data (Miller et al. 1970). In this regard, 32 (86.5 percent) of the 37 studies addressed subject attrition before

Table 2. Summary of Methodological Parameters Reported by 37 Alcohol Treatment Outcome Evaluation Studies

Investigators and Year	Pretreatment Assessment (Yes/No)	Number of Outcome Sources Used	Drinking Outcomes Differentially Assessed (Yes/No)	Number of Other Outcome Measures	Followup Length (in months) and Equal Intervals ¹	Percent Subjects Followed Up ²	Highest Level Statistical Analyses Used on Outcome Data ³	Pretreatment Status Controlled (Yes/No)
Azrin 1976	Yes	3	No	5	24E	100.0	U	Yes
Booth and Grosswiler 1978	No	2	No	4	17.5 ⁴	49.0	U	No
Caddy et al. 1978	No	2	Yes	7	12E	75.4	U	Yes
Chaney et al. 1978	Yes	3	Yes	6	12E	97.5	M	Yes
Costello et al. 1979	No	1	No	5	24E	92.0	NP	No
Crawford 1976	No	2	No	0	24E	71.0	None	No
Edwards, Bucky et al. 1977 ¹	No	1	n.r. ⁵	3	24E	100.0	U	No
Edwards, Orford et al. 1977 ²								
(also Orford et al. 1976 ¹ and 1976 ¹)	Yes	3	No	6	24E	100.0	U	Yes
Ewing and Rouse 1976	No	3	No	3	n.d. ⁶	n.d.	None	No
Freedberg and Johnston 1978	No	4	No	1	12E	90.0	U	No
Fuller and Roth 1979	No	4	No	5	12E	98.4	U	Yes
Gellens et al. 1976	No	1	No	1	19E	74.8	NP	No
Hyman 1976	No	3	No	8	180+E	91.7	None	No
Jackson and Smith 1978	No	1	No	0	24	59.0	NP	No
Kanas et al. 1976	Yes	3	No	10	6E	41.9	U	No
Levinson 1977 (Study 1)	Yes	1	No	2	12E	90.0	None	Yes
Levinson 1977 (Study 2)	Yes	1	No	3	60E	89.6	None	No
Miller 1978	Yes	3	Yes	3	12E	71.0	U	Yes
O'Leary et al. 1977	Yes	2	n.r.	3	12E	100.0	U	No
Polich et al. 1980 ^{1,2}	Yes	5	Yes	14	1 ⁷ E	85.0	M	Yes
Pomerleau et al. 1978	No	3	Yes	2	12E	75.0	U	Yes
Popham and Schmidt 1976	Yes	1	Yes	0	24E	66.0	U	No
Seelye 1979	No	2	No	0	n.r.	66.0	NP	No
Skjula et al. 1976	No	1	No	4	24E	12.3	NP	No
Smart 1978 ^{1,2}	Yes	1	No	1	12E	69.7	M	No
Sobell and Sobell 1976								
(also Maisto et al. 1980)	Yes	3	Yes	9	24E	98.6	M	Yes

Table 2. Summary of Methodological Parameters Reported by 37 Alcohol Treatment Outcome Evaluation Studies

Investigators and Year	Pretreatment Assessment (Yes/No)	Number of Outcome Information Sources Used	Drinking Outcomes Differentially Assessed (Yes/No)	Number of Other Outcome Measures	Followup Length (in months) and Equal Intervals ¹	Percent Subjects Followed Up ²	Highest Level Statistical Analyses Used on Outcome Data ³	Pretreatment Status Controlled (Yes/No)
Stinson et al. 1979	No	2	No	4	18E	n.r.	M	Yes
Jecker and Bouillier 1976	No	2	No	1	12E	n.r.	None	No
Vannicelli 1979	Yes	1	No	6	var. ⁴	100.0	U	Yes
Vannicelli et al. 1976	No	1	No	0	1 ⁵ E	43.3	U	No
Vogler et al. 1977 ¹	Yes	2	Yes	1	18E	64.2	M	Yes
Vogler et al. 1977 ²	Yes	3	Yes	2	12E	89.0	M	Yes
Watson et al. 1978	Yes	1	Yes	6	18E	92.0	U	Yes
Wiens et al. 1976	No	1	No	0	12E	92.0	n.r.	No
Williams 1977	Yes	1	No	1	12E	100.0	U	No
Wilson et al. 1978 ¹	No	2	No	1	24E	95.0	U	Yes
Wilson et al. 1978 ²	Yes	1	No	4	3E	96.0	M	Yes

¹ Studies with equal followup intervals for all subjects are designated by an E.
² Includes those subjects reported as deceased.
³ M = Multivariate; U = Univariate; NP = Nonparametric; None = No statistical test used or reported.
⁴ This figure represents a mean followup interval for the subjects in this study.
⁵ n.r.: not reported.
⁶ n.d.: not determinable from evidence reviewed.
⁷ These followup intervals represent the 1 month before the interview, but occurred 12 months or more posttreatment.
⁸ var. varied with the parameter considered.

and/or during treatment. Finally, 90 percent of the 30 studies that mentioned staff type used professional therapists. Of the remaining 3 studies, 2 had both professional and paraprofessional staff, and 1 had only paraprofessional staff.

As mentioned throughout this paper, a study's subject population needs to be adequately described in terms of pretreatment sociodemographic and alcohol history. Twelve specific sociodemographic and alcohol pretreatment history characteristics were selected, and each study was evaluated as to whether it adequately described its subject population in terms of those characteristics. Sex and age were the two characteristics reported by the highest percentages of studies, 97.3 percent and 94.6 percent, respectively. Pretreatment alcohol-related arrests were reported by the lowest percentage of studies (21.6 percent). The percentages of studies reporting information for the remaining nine characteristics were as follows: vocational information—78.4 percent; marital status—64.9 percent; education—62.2 percent; referral source—54.1 percent; length of problem with drinking—46.0 percent; presence or absence of alcohol dependence—40.5 percent; alcohol-related prior treatment—40.5 percent; ethnicity—35.1 percent; and pretreatment alcohol-related hospitalizations—29.7 percent. Included in a category of "other" characteristics were a few studies that reported religion, special population characteristics (e.g., veteran), and factors describing that population through psychological tests. Clearly, none of the 37 studies reported information on all of the 12 characteristics. This is unfortunate considering the importance, for example, of age, sex, and length of drinking problem for defining the population under study. Even more alarming is the fact that less than 50 percent of the studies reported some level of alcohol-related problem information; this information seems crucial to determining the appropriateness of the treatment under investigation.

Pretreatment assessments of drinking and/or other measures of functioning were reported in only 48.7 percent ($n = 18$) of the studies; and of those 18 studies, only 13 listed the length of the pretreatment assessment interval. In those few studies, pretreatment assessment ranged from 1 to 12 months. A similar number of studies (46.0 percent, $n = 17$) also reported controlling or accounting for differential pretreatment status. Additionally, while 18 studies (48.7 percent) examined and reported information on pretreatment and/or treatment predictor variables, it must be cautioned that many of these studies did not base their conclusions on statistical findings, but rather drew inferences on casual examination of the data.

Because no single source of outcome data is totally error free, a convergent validity criterion was stressed. Seven categories were used to assess the number and types of information sources used to gather

outcome data: (a) self-reports; (b) collateral reports; (c) official records; (d) breath alcohol tests; (e) physiological measures—urine screens and/or liver function tests; (f) treatment staff reports; and (g) other. The percentage of studies that used the different information sources to gather outcome data were as follows: (a) self-reports—89.2 percent; (b) collateral reports—54.1 percent; (c) official records—32.4 percent; (d) breath alcohol tests—8.1 percent; (e) physiological measures—5.4 percent (two studies used liver function tests and one used urine analysis); (f) staff reports—5.4 percent; and (g) other—8.1 percent (psychological test, interviewer judgment). More than half (56.8 percent, $n = 21$) of the studies used two or more information sources for outcome data, while 29.7 percent ($n = 11$) used three or more sources (in each case self-report was counted as one of the sources). In regard to subjects' self-reports, two additional points deserve mention. In 32.4 percent ($n = 12$) of the studies, the only source of outcome data was subjects' self-reports. Also, four studies collected no outcome data from subjects. The fact that most of the studies reviewed used multiple information sources to obtain outcome data is quite impressive. It is unfortunate, however, that only 3 of the 37 studies mentioned whether subjects were intoxicated when interviewed. Such information is crucial to the validity of subjects' self-reports of drinking behavior, as studies have shown that alcohol abusers' reports of their recent drinking are often invalid if they are interviewed when they have a positive blood alcohol level.

Only 2 of the 37 studies failed to report any measurement of drinking behavior, but only 11 (31.4 percent) of the studies assessed drinking behavior using a continuous and quantifiable measure—number of ounces of ethanol consumed. The remaining 24 studies (68.6 percent) either measured drinking behavior in a very global and subjective fashion (e.g., improved, same, or worse), or used the dichotomous classification of abstinent or drunk, classifying any and all drinking in the latter category. Six studies used drinking behavior as their sole measure of treatment outcome. Most of the studies (82.9 percent, $n = 29$) that assessed drinking behavior also used one or more other measures of treatment outcome.

Besides drinking, each study was also evaluated for its use of 14 other outcome measures. The percentages of studies using these other life health outcome measures were as follows: vocational—59.5 percent; alcohol-related hospitalizations—35.1 percent; physical health—27.0 percent; psychological tests—27.0 percent; social/recreational—24.3 percent; familial—24.3 percent; additional treatment reported—21.6 percent; alcohol-related arrests—21.6 percent; residential—18.9 percent; interpersonal—13.5 percent; cognitive—13.5 percent; legal—10.8 percent; emotional—10.8 percent. Thirteen other types of outcome measures were coded into an aggregate "other" category. Of the 29 studies that used other life health measures in

addition to drinking behavior, the mean number of different outcome measures used was 3.5. This finding is consistent with the criterion of a multivariate treatment outcome evaluation model.

Several aspects of each study's followup methodology were also assessed. Two of the studies failed to report the exact followup interval, and three failed to address the issue of attrition in followup. To be included in this review, each study had to have followed its subjects over a minimum interval of 12 months. However, three studies used a 30-day window; that is, they only collected data for the 30 days prior to the time of interview. Since a 30-day pretreatment window is not adequate for use with some populations (Cooper et al. 1980), it is doubtful that such an interval provides a representative reflection of stable treatment outcome.

Most of the studies had at least 1 year of followup for all subjects, but the longest followup interval was reported to be over 5 years. On the average, over three-fourths (78.4 percent) of the subjects in all studies were found for followup. This is a surprising and most welcome finding, because one of the major problems noted in previous reviews has been the high rate of subject attrition in followup. The percentage of subjects found for these studies ranged from a high of 100 percent to a low of 12.3 percent. Most studies (89.2 percent, $n = 33$) also reported equal-interval followup outcome data for all subjects in their study. One interesting assumption repeatedly mentioned in the studies was that those subjects who were lost to followup were probably treatment failures. Although this assumption is consistent with findings about subjects who are hard to locate or initially lost to followup, this does not relieve investigators of the obligation to gather as complete and comprehensive outcome data as possible. For the 35 studies that reported the number of followup contacts, the mean number of contacts was 5.9, with a range of 1 to 52 contacts. This figure suggests that investigators are moving away from a single followup assessment and instead are conducting multiple followups to gather outcome data.

The last methodological dimension along which studies were compared was the highest level of statistical analysis performed on the outcome data. While close to half of the studies (46.0 percent, $n = 17$) used univariate data analyses, one-fifth (18.9 percent, $n = 7$) used no statistical analyses to evaluate their outcome data. The remainder of the studies used either multivariate data analyses (21.6 percent, $n = 8$) or nonparametric analyses (13.5 percent, $n = 5$). Even though most studies used some level of statistical analysis to derive their conclusions, one cannot overlook the fact that seven studies apparently drew conclusions without the aid of statistical tests. Thus, the findings reported by these seven studies must be considered tenuous, since no attempts were made to determine the likelihood that the findings occurred by chance.

Strengths, Weaknesses, Innovations

Unlike the four previous reviews of the treatment outcome evaluation literature, some methodological advancement is clearly evident among the 37 studies reviewed. However, it must be recognized that the following conclusions are based on a very small and somewhat selected body of studies. Major methodological advancements include (1) using multiple information sources to gather outcome data; (2) using multiple measures of life health functioning, in addition to drinking, to assess treatment effectiveness; (3) using a minimum 12-month followup interval to assess outcome; (4) using equal followup intervals for all subjects; and (5) conducting multiple assessments throughout the followup interval.

Three other methodological improvements are also apparent in the literature. First, studies are now beginning to examine statistically the relationship of outcomes to pretreatment and treatment predictor variables. Second, more studies are using univariate or multivariate data analyses to evaluate outcomes. Third, and perhaps most important, many studies are now reporting a high percentage of subjects found for followup. On the average, the studies in this review reported data for close to 80 percent of their subjects.

Despite the definite advancements that have recently occurred in alcohol treatment outcome evaluation, methodological weaknesses still outnumber strengths. Although the conduct of any treatment outcome evaluation study consumes time and resources, there is no obvious justification for the following methodological weaknesses: (1) inadequate reporting of subjects' sociodemographic and alcohol history characteristics; (2) an insufficient or nonexistent description of type and amount of treatment provided; (3) lack of any assessment prior to treatment; (4) when possible, failure to assess whether subjects were intoxicated when interviewed; (5) failure to perform any or appropriate statistical analyses in support of outcome conclusions; (6) failure to control or account for differential pretreatment status among treatment groups; (7) failure to statistically analyze for variables predictive of treatment outcome; and finally, and perhaps most important, (8) not measuring the very behavior—drinking—for which treatment has been provided. If we are to gain significant knowledge about patterns of outcome, improvement, and relapse, then drinking behavior must be differentially measured and reported.

Another problem noted with these studies is that they used various reference groups for reporting their findings and conclusions; some reported data on the original study sample, others only on those subjects who completed treatment, and still others included only those

subjects found for followup. The problem here is obvious and, of course, makes comparison across studies impossible.

Contributions to the Understanding of Alcohol Problems

Considered in the context of other recent advances in the alcohol field (Pattison et al. 1977), outcome evaluation studies have recently made major contributions to the understanding and treatment of alcohol problems. Those contributions will be briefly noted. First, as this review and other studies have indicated (Davies et al. 1956; Gerard and Saenger 1966; Gillies et al. 1974; Orford 1973; Paredes et al. 1973; Pattison et al. 1968; Polich, Armor, and Braiker 1980; Polich, Armor, and Braiker 1981), continual abstinence throughout the followup period is a relatively rare finding. This is not to suggest that abstinence is not an appropriate treatment goal for most clients. Rather, it suggests that our present knowledge about the natural history of recovery indicates that the recovery process is usually prolonged and involves gains and setbacks, with gains increasingly predominating over time. Thus, it seems most appropriate to view recovery from alcohol problems as graded and lying along a continuum. This characterization of typical outcomes, likewise, suggests that more treatment emphasis should be placed on efforts to consolidate and maintain treatment gains.

As more studies present data on multiple and different populations of alcohol abusers, the need for a differentiated approach to treatment and treatment outcome evaluation has become apparent. Studies of problem drinkers, for example, indicate that, in most respects, they are very different—pretreatment, during treatment, and posttreatment—from chronic alcoholics (Hart and Stueland 1979; Maisto, Sobell, Cooper, and Sobell 1979; Moos and Bliss 1978; Pattison et al. 1973; L. C. Sobell and M. B. Sobell 1978). On the whole, while these studies suggest that problem drinkers have suffered some consequences from their drinking (e.g., legal problems—drunk-driving arrest; threat of separation by one's spouse), significant alcohol-related physical damage or major life disabilities have not occurred. In contrast to chronic alcoholics, problem drinkers usually have intact economic, social, and family resources; they are typically younger, have had fewer alcohol-related arrests and hospitalizations, and have suffered few, if any, major alcohol withdrawal symptoms. In this regard, the implications for treatment and treatment outcome evaluation are twofold. First, problem drinkers start treatment with less overall dysfunction; thus, their treatment may not need to be as comprehensive as that provided for chronically debilitated persons. Second, because problem drinkers typically suffer marked dysfunction in only certain areas of life functioning (e.g., some may have only legal problems, others only family problems), it is important that pretreatment impairment in multiple areas

of life health be assessed. Similarly, when evaluating outcomes, improved functioning can largely be expected to occur only in those areas where substantial dysfunction existed prior to treatment.

Finally, a few studies have indicated that posttreatment life events, quite apart from treatment, can have an effect on outcome. Once treatment is completed, a host of factors can potentially affect gains or losses in treatment outcome. Thus, outcome evaluations should include an assessment of the influence of posttreatment life events on outcome.

Summary

Since the last major review of alcohol treatment outcome evaluation, significant methodological advancements have occurred. We caution against taking solace in these gains, however, because this conclusion is based only on the 37 studies reviewed. Over twice that many studies were excluded from the review because of their failure to meet minimum methodological criteria. Further, it might be postulated that several additional unpublished studies exist. Therefore, a more appropriately circumscribed conclusion is that the methodology of well-designed outcome studies has improved considerably over the past few years.

The future directions for alcohol treatment outcome evaluations seem clear. Methodologically sound treatment outcome evaluations can be done! However, they need to be done more often, to become the standard rather than the exception. There is also a great need for comparability among studies in terms of methodological reporting requirements and the types of outcome measures utilized. Until this happens, comparisons among treatment studies are difficult or impossible.

Because methodologically sound treatment outcome studies are possible, the responsibility for continued growth and advancement in the alcohol field lies squarely on the shoulders of State and Federal funding agencies, which should require and accept only studies and projects that meet minimum requirements for adequate treatment outcome. It is incumbent upon Federal and State agencies and other review bodies to enforce greater standards of scientific quality when reviewing grants and demonstration projects. Coupled with this is the necessity for peer review mechanisms (e.g., professional journals) to enforce similar standards when reviewing outcome studies for possible publication. In conclusion, requiring alcohol treatment outcome studies to be methodologically sound should be both a governmental and a scientific priority.

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Chapter 10

State and Local Programs on Alcoholism

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Abstract

The etiology of the syndrome also appears to be more complex than one believed. The neural damage associated with the Wernicke-Korsakoff syndrome has traditionally been attributed to a deficiency in thiamine, but recent animal studies demonstrating the neurotoxicity of alcohol have suggested that the amnesic symptoms may be due to an interaction of malnutrition and the toxic effects of alcohol. Behavioral studies reporting that non-Korsakoff alcoholics have memory deficits qualitatively similar to those of Korsakoff patients support the idea that Korsakoff's syndrome is not acute, but may develop slowly during decades of alcohol abuse.

While alcohol has been considered for nearly 200 years to have teratogenic potential, it is only recently that the Fetal Alcohol Syndrome (FAS) was named to refer to a specific pattern of malformations common to the offspring of chronic alcoholic women. This constellation of defects includes prenatal and postnatal growth deficiencies, central nervous system anomalies, craniofacial peculiarities, and associated major and minor malformations. The evidence from both the clinical and animal literature indicates that alcohol indeed is a teratogen in its own right. Animal studies have served to clarify the role of prenatal alcohol exposure in the etiology of birth defects, since they have produced a pattern of malformations bearing a striking similarity to FAS, in the presence of carefully controlled nutritional and environmental factors. The results of the animal studies on growth and development parallel those of the human studies, reporting that retarded prenatal growth, increased prenatal mortality, and higher incidence of morphological anomalies are directly related to the amount of alcohol consumed by the mother, but suggesting that genetic background may be an important factor. While human research reports that mental retardation and delayed psychomotor development are primary features of FAS, the neuroanatomical work has given insight to possible underlying structural brain anomalies and has indicated that brain maturation is retarded as well. Unfortunately, the few neurochemical and biochemical studies conducted to date have been unable to report conclusive results. It is to be expected that

Introduction

The systems of services for alcohol abuse and alcoholism that exist in 1980 are based on a variety of responses—from public and private, governmental and nongovernmental sources—to the problems of the alcoholic. These resources have grown dramatically in their ability to provide services, from a small number of community and hospital programs which sprang up as early as the turn of the century, to a sophisticated and complex service system composed of State, Federal, local, and private resources. Today these services represent an annual expenditure of nearly \$800 million for alcohol abuse and alcoholism in treatment alone. Of the total funding for treatment services provided to alcoholics today, more than one-third is derived directly from State and local sources (National Drug and Alcoholism Treatment Utilization Survey 1979).

Background

The growth of State and local alcoholism programs in this century has been so rapid that the service systems today bear little resemblance to their predecessors. As early as 1870, the State of Minnesota established a “Hospital for the Insane and Inebriate,” where alcoholics were kept with persons deemed unsafe to society. Massachusetts and other States used public institutions and hospitals to house the skid row alcoholics. Another common response to alcoholism was criminal confinement.

A brief historical overview is relevant to the understanding of State and local alcoholism programs in 1980, although it should be recognized that interpretation of historical events varies and differs among persons in the alcoholism field. Precedents for the development of State and local alcoholism programs as they now exist began in the 1930s and 1940s when a small number of informal service programs emerged, run by volunteers, in part in an attempt to develop alternative methods of caring for alcoholics. Prior to this, their only care was in mental hospitals, prisons, or jails. In 1949, program representatives from the United States and Canada met at Yale University and formed the National States’ Conference on Alcoholism—an organization whose purpose was to exchange ideas on the embryonic status of developing State and local programs on alcoholism. Several years later, in 1956, the new and expanded North American Association of Alcoholism Programs (NAAAP) succeeded the States’ Conference.

From the 1940s through the 1950s, a number of organizations concerned with the alcoholic developed to serve as both listening posts and mouthpieces for the need for more services. Organizations such as Alcoholics Anonymous (AA), the National Council on Alcoholism (NCA), the Salvation Army, and the North American Association of Alcoholism

Programs created systems of advocacy for the alcoholic. As a result of extensive efforts to persuade the public that alcoholism was a treatable disease, decisionmakers throughout the country began to hear—and to act on—the problems of alcoholism and alcohol abuse. In 1956, the American Medical Association recognized alcoholism as a treatable illness. By this time, many State governments, working in concert with Alcoholics Anonymous and small local programs, began to establish formal means to study alcoholism as a health problem and plan future resources for dealing with it. Governments also began to focus more resources on the treatment and rehabilitation of the alcoholic, embracing Alcoholics Anonymous as the primary form of treatment.

One of the most significant results of the growth of State and local alcoholism programs and organizations concerned with alcoholism during the 1950s was that they produced new human successes—recovered alcoholics, many of whom became advocates for continued expansion of publicly funded programs at all levels of government. Advocates from organizations such as NCA and NAAAP, as well as individuals who were AA members, actively sought alternatives for treating alcoholics in appropriate settings, rather than in sanatoriums for tuberculosis, mental institutions, city- and State-operated hospitals, and jails—all common State and local responses to the problem of alcoholism in the 1940s, 1950s, and 1960s. In 1955 an important new treatment resource emerged in addition to State and local programs—the halfway house, where alcoholics lived in an alcohol-free environment while learning to function in the community.

Advocates for expanded alcoholism services continued, with growing success, to press for State and local governments to recognize the need for alcoholism treatment. By the mid-1960s nearly every State government had initiated some action on alcoholism, ranging from a small appropriation for treatment programs to the appointment of highly visible State programs to study alcoholism. Organizationally, most State programs on alcoholism in the 1960s were established as independent commissions within executive level branches of government. This organizational pattern was the result not of prestige for the issue, but rather of the stigma still attached to the disease, and the little that was known about it. It also signaled lack of acceptance of alcoholism as a true public health concern.

The growth in service capacity of State and local programs in the 1960s was bolstered by a number of events which increased public support for treatment of alcoholism as a public health problem. Two Federal courts, in the cases of *Easter v. the District of Columbia* (D.C. Cir. 1966) and *Driver v. Hinnant* (4th Cir. 1966), found that alcoholism was an illness or a disease, and that a chronic alcoholic could not be held criminally responsible for public intoxication.

The preface of the model Uniform Alcoholism and Intoxication Treatment Act states:

In 1967 three authoritative commissions, the U.S. and the D.C. Crime Commissions and the Cooperative Commission

on the Study of Alcoholism, found that the criminal law was an ineffective, inhumane, and costly device for the prevention and control of alcoholism or public drunkenness. All recommended that a public health approach be substituted for current criminal procedures. Another major effort to change public policy toward alcoholism and the treatment of public intoxication came in 1969 when the American Bar Association and American Medical Association, which earlier had collaborated on new model legislation based on the Crime Commission Reports, released a "Joint Statement of Principles Concerning Alcoholism" in which they urged State governments to adopt new comprehensive legislation in which alcoholism would be viewed as an illness and public intoxication would no longer be handled as a criminal offense.

All of these important events, combined with the advocacy of a growing alcoholism constituency, led to a major public health response to the problems of alcohol abuse and alcoholism that has lasted from the late 1960s to 1980, and created the thrust for Federal involvement in alcoholism. The Federal investment began with establishment of the National Center for Prevention and Control of Alcoholism within the National Institute of Mental Health in 1966, following a call by then-President Lyndon B. Johnson to deal with the problems of alcohol abuse and alcoholism. In 1967 Congress passed Public Law 90-452, entitled the District of Columbia Alcoholic Rehabilitation Act of 1967, which created within the District of Columbia a system of treatment as an alternative to incarceration for alcoholism. This was expanded to a national response in 1968 with passage of the Alcoholic Rehabilitation Act, Public Law 90-574, which recognized alcoholism as a major health problem and authorized Federal funds to construct and staff alcoholism service facilities.

The 91st Congress enacted several pieces of legislation concerning alcoholism. Public Law 91-211, amending the Community Mental Health Centers (CMHC) Act, required the federally funded CMHCs to provide alcoholism treatment. Public Law 91-527 established within the Office of Education a small Alcohol and Drug Abuse Education Program. Finally, on December 31, 1970, came passage of the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act, Public Law 91-616, also known as the Hughes Act after its chief advocate, Senator Harold L. Hughes of Iowa.

Passage of the Comprehensive Alcoholism Act had a tremendous impact on the growth of State and local alcoholism programs throughout the 1970s. Although programs within States and localities had developed nationwide, there was little consistency among them as a response to alcoholism as a health problem. At the State level, programs varied from education, to treatment, to informal referral offices. Local governments also operated a variety of programs which in turn were not often coordinated with State programs. But Public Law 91-616 and its subsequent amendments, including incentive grants to

implement the Uniform Alcoholism and Intoxication Treatment Act (Public Law 93-282) and extension and revisions contained in Public Law 94-371, not only solidified the Federal commitment to combating alcoholism through establishment of a national institute and project grants to local communities, but also secured the commitment of the States through the creation of State Alcoholism Authorities (SAAs). In addition to a major program to assist communities through individual project grants, funds provided to the States, known as formula grants, formed the basis for rapid and systematic growth of State and local alcoholism programs throughout the 1970s. These State funds enabled States to provide a wide range of services to previously unserved persons in accordance with needs within each State, and established State plans as a means for coordinating a wide range of other social services helpful to treatment and rehabilitation of the alcoholic.

This Federal initiative was a major development in the alcoholism field because it created the elements of a systematic, national response to alcoholism, and established "a framework within which for the first time Federal, State, and local governments can effectively utilize their health and rehabilitation resources to bring the problem under control" (U.S. Senate Committee on Labor and Public Welfare 1970).

Organization and Funding of State and Local Programs

Enactment of the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act of 1970 had an impact not only on the availability of appropriate community services for alcoholics through the infusion of additional dollars, but also on the organization of State and local alcoholism programs.

Organization

State programs of the late 1950s and 1960s had often been established as executive level commissions or study programs within the office of the Governor. The major infusion of Federal dollars in the 1970s, however, brought about reorganization of the State offices on alcoholism within the administrative structures of State government, such as within departments of mental health, public health, welfare, or social services.

Another important change of the early 1970s was a trend toward closer organizational and programmatic relationships with State and local drug abuse programs, which had been established by the Drug Abuse Office and Treatment Act of 1972, Public Law 92-255. That statute, modeled in part after the Hughes Act, provided for a system of drug abuse services similar in structure to that for alcoholism, including designation of State drug abuse authorities. Throughout the 1970s many State and local governments gradually combined their alcohol

and drug abuse programs both administratively and organizationally into "addiction" or "substance abuse" programs. Further evidence of this was the creation of the Alcohol and Drug Problems Association (ADPA) in 1971 as the successor to the North American Association of Alcoholism Programs (NAAAP). In spite of the trend toward combination at the State level, the number of organizations, both public and private, concerned primarily with alcoholism also grew during the 1970s.

By 1980, 45 of 57 States and Territories had effected some combination of alcoholism and drug abuse programs at the State level. Nearly half of the State Alcoholism Authorities in the 57 States and Territories were located organizationally within an agency of health or public health; one-third were within mental health agencies; and roughly one-eighth were within agencies on social services, rehabilitation, or welfare. Only 2 States now have independent, executive level, separate State Alcoholism Authorities—Texas and New York. Six other States that have combined alcohol and drug abuse program administration into joint State authorities have retained the programs' independent status.

Growth in State and Local Funding

In the decade since enactment of the Federal legislation on alcoholism and formal designation of the State Alcoholism Authorities, funding sources for State and local programs have grown so that what once seemed like a giant Federal investment in the early 1970s is now dwarfed by the infusion of funds from many other sources. In fiscal year 1979, the National Institute on Alcohol Abuse and Alcoholism (NIAAA) direct project grant funds represented approximately 7 percent of the total funding for treatment services in alcoholism (National Drug and Alcoholism Treatment Utilization Survey 1979). As a result of the new roles for State and local government programs on alcoholism which grew out of the Federal legislation, other funding sources were added. These include Federal-State title XX programs, other social services provided by State and local governments, State and local tax revenues, public and private insurance coverage, and Federal sources such as medicare, medicaid, supplemental security income, and food stamps.

Yet the largest single source of public funding for all alcoholism services is derived from taxes raised by the States themselves. According to the State Alcoholism Profile Information System (1979), these funds totaled about \$247 million in fiscal year 1978, and comprised 36 percent of the total funds available from Federal, State, and local sources in that year for all alcoholism services, including treatment. Local revenues for alcoholism programs from funding sources such as city and county governments contributed roughly \$68 million for alcoholism services in fiscal year 1978, or about 13 percent of the available Federal, State, and local dollars.

The principal sources of State funds are those appropriated from general State revenues. These are allocated both directly to the State Alcoholism Authority for support of statewide service systems, and to

other departments of government for alcohol programs, such as education, highway safety, and services in the criminal justice system.

Earmarked Taxes

To enhance funding for alcoholism services at the State and local levels, many State legislatures have enacted additional taxes on the sale of alcohol, a portion of which is specifically earmarked for support of alcoholism services. Although still a controversial revenue collection technique, nearly every State and the Federal Government have considered the earmarked tax on alcoholic beverages as a means for raising needed funds for alcoholism services. By January 1978, 18 States had adopted some form of the tax.

Earmarked taxes have taken a variety of forms, and are used in a variety of ways. Often some of the funds go to local governments, and some local governments have earmarked revenues themselves. For example, the State of Michigan designates both a percentage of the tax on liquor license fees and a special earmarked sales tax to support State and local services. Together these taxes raise nearly \$4 million annually. Oregon collects one-third of the manufacturers' excise taxes on alcohol specifically for alcoholism programs. Of this amount, 40 percent is given to local governments for treatment and rehabilitation services, and 40 percent provides State matching funds for alcoholism services. In all, nearly half of the revenue collected by that State from earmarked alcohol taxes is dedicated to alcohol problems of minority populations.

For several other States, the earmarked tax is a way of raising needed revenues for services necessary to implement the Uniform Act. Idaho added 2 percent to the price of liquor, wine, and beer sold at State liquor stores to raise money for services after adopting its decriminalization legislation. Mississippi, which has legislation similar to the Uniform Act but does not decriminalize public intoxication and therefore does not qualify for Federal funds, has a 3 percent surtax on alcoholic beverages which is used solely to support treatment and rehabilitation efforts in halfway houses and community treatment facilities.

In some cases, the amount of funds raised by this means is substantial. North Carolina, by means of a five-cent bottle tax and a 7 percent tax on liquor profits, raises annual revenues for alcoholism services of \$3 to \$4 million. South Carolina also raises nearly \$4 million annually by means of the earmarked tax (National Clearinghouse on Alcohol Information 1978). However, it is difficult to estimate the exact total dollars being raised by earmarked State taxes to support alcoholism services. In general, taxes on the sale of alcohol represent the second largest source of revenue in the United States. In 1977, State and local governments together raised about \$4.6 billion through a variety of different taxes on the sale of alcohol; the Federal Government raised about \$5.5 billion (Distilled Spirits Council of the

United States 1980). If Federal and State funding sources for alcoholism services level off or decline in the 1980s, more States may consider the earmarked tax as a funding alternative.

Insurance Coverage

An important element in the funding of State and local alcoholism programs that has come about in the 1970s, as a result of the recognition of alcoholism as a treatable illness, is insurance coverage of alcoholism treatment services. Many States, as regulators of insurance coverage within the States, have, by either regulation or legislation, required that treatment for alcoholism be reimbursed by insurers. In 1979 a total of 25 States had enacted some form of insurance requirement, ranging from mandatory coverage of alcoholism on an equal basis with other health care problems to a required option for coverage if desired by a policyholder (Cooper 1979). Although no standard benefits package exists, typical benefits range from individual to group coverage, hospital to outpatient care, and infrequently to rehabilitative services as well.

Generally, insurers have not been providing reimbursement for a wide range of treatment and rehabilitation services provided outside of a hospital. However, largely as a result of State insurance mandates, public and private insurers represented a major portion of the available funds for treatment in fiscal year 1979. According to the National Drug and Alcoholism Treatment Utilization Survey (1979), these public and private insurers contributed \$204 million to treatment in 1979, or about 26 percent of the funds available. Experience to date suggests that insurance coverage is likely to be an increasingly important source of funding for services in the 1980s. The long-term economics, however, will depend on whether the insurers themselves revise reimbursement policies to recognize non-hospital-based alcoholism service providers as eligible for reimbursement.

Equally important in terms of reimbursement by public and private insurers for alcoholism services are the new demands on State and local providers for accountability. As a result, fiscal management, credentials for service providers, and the quality of services provided have all become issues of greater attention in the alcoholism field.

Alcoholism Service Priorities

The growth in State and local funding resources for alcoholism services has led to increasing diversity in spending patterns and the types of programs and services supported by State Alcoholism Authorities. Financial data collected by SAPIS for fiscal year 1978 show that while treatment and rehabilitation continue to be by far the highest priority for the use of State-appropriated funds, other priorities include prevention, intervention, research and evaluation, training of personnel, and planning and administration of statewide alcoholism services. For

fiscal year 1978, State governments allocated some \$247 million to support services in these seven major program areas, as shown in table 1.

Table 1. State Allocations for Alcoholism Services—Fiscal Year 1978

	Number of States ¹ Reporting	State Funds Total Funding	Percentage of Total Funding
Prevention	48	\$ 7,452	3
Intervention	48	16,535	7
Treatment and rehabilitation	51	200,780	81
Research and evaluation	47	2,826	1
Training	47	1,103	1
Administration	50	9,940	4
Planning and other	47	7,885	3
Total	51	\$ 246,521	100

SOURCE: State Alcoholism Profile Information System (SAPIS), September 1979.

¹ May include territories.

Not enough data have been collected on the allocations of local funds in program categories to construct an analysis similar to that for State funds, but studies of local funding for drug abuse services show that localities often allocate the greatest share of their resources to treatment and rehabilitation. This may be an indication of similar trends for local spending for alcoholism services.

State and Local Roles in Providing Services

The growth in State and local funding sources for alcoholism services has led to diversity in spending patterns and programs, and to growth in the functions of State and local programs. Whereas in the 1960s programs were limited by lack of personnel and funding to functions that were often narrow in scope, today both the State Alcoholism Authorities and local providers have taken on broader responsibilities which have in turn contributed to the continued growth of a national service capability. The basic functions that support the services systems fall into three major areas: management and administration of services, monitoring and quality assurance, and intergovernmental relationships.

Services

The State role in the area of services generally involves allocating resources from a variety of funding sources to local programs which have the major responsibility for providing services. These funding sources include State revenues and formula grant and incentive grant funds. Few States operate alcoholism treatment programs directly. The State role does not include funding or management decisions regarding programs directly supported by NIAAA beyond comments on funding applications, although often State and local funds are apportioned to NIAAA's programs to supplement or enhance their service activities. Typically the SAA has a process for funding a broad range of community service facilities including halfway and quarterway houses, recovery homes, community mental health centers, outpatient clinics, general hospitals, criminal justice system treatment programs, and occupational programs. Even though States are not directly involved in providing treatment services, with a few exceptions, they are actively involved in policy and program development through the funding decisions they make.

By congressional direction the Federal formula is based on a State's population, per capita income, and need for alcoholism services. In general the States have not adopted funding formulas similar to the Federal formula grant for allocation of their own resources within the communities. Most States have developed criteria based on the need for services and the availability and cost of resources. In recent years, since enactment of the National Health Planning and Resources Development Act, these decisions have been arrived at in conjunction with criteria for funding health services developed by the Health Systems Agencies (HSA). In some States, funding decisions are made in conjunction with the State Advisory Council on Alcoholism, established as a condition for receipt of Federal formula grant funds.

In contrast to treatment services, where States are likely to rest most of the responsibility for direct services with local programs, prevention and education are areas where States have played a major role in direct program operation. Many States annually plan and conduct education programs on alcoholism. Recently there have been notable State efforts in providing information on the fetal alcohol syndrome. The State role in prevention is often in program development; through contracts with voluntary associations and local programs, the State provides prevention and education materials to communities.

Another State function related to alcoholism services is statewide planning, which involves determining the need for alcoholism services and the availability of resources. The National Health Planning and Resources Development Act has given the State Alcoholism Authority additional responsibilities with regard to planning. The Act requires the SAA to establish processes for HSA review of proposed uses of Federal alcoholism funds allotted to programs by the State. These include Federal formula grants and incentive grant funds.

Because of the Federal predominance in research, relatively few States and localities are involved in research related to alcoholism. There are of course notable exceptions, such as California which has conducted studies on the cost benefits of alcoholism treatment; this research has strengthened efforts of other States to obtain insurance coverage for alcoholism.

Quality Assurance

State and local programs are working together to improve the quality of alcoholism services as well as their quantity. Quality assurance involves periodic monitoring and auditing of programs receiving State and local funding, licensing of programs as a condition for receipt of funds, and credentialing of personnel delivering services in the community. Each of these functions takes on added importance because the Federal role in this area has been a weak one, owing in part to a history of minimal Federal involvement in the quality assurance area, even when Federal funds are involved, and to Federal policy which dictates that the Government will not license health care programs.

Most States conduct periodic monitoring and program audits as conditions for receipt of funds appropriated by the State. This function exceeds simple inspections. In practice, monitoring is more likely to take the form of technical assistance to program staff in the essential aspects of program operation such as recordkeeping, financial management, treatment techniques, and evaluation. Monitoring may also involve judging program compliance with State standards for operation.

Many States monitor programs in conjunction with the issuance of State licenses for operation. Often the issuing agency is not the SAA, but rather a program-licensing office in another agency of government. Local units of government also issue licenses. Licensing criteria require, at a minimum, adherence to standards for both services and facilities. Licensing is a critical function for program funding, not only to qualify for State funds, but also to receive reimbursement from public and private insurers. Experience shows that private insurers may reimburse programs licensed by a State, even if they are not licensed by the federally recognized Joint Commission on the Accreditation of Hospitals.

Assuring and improving the credentials of persons who provide alcoholism services is another area of growing importance for State and local responsibilities in quality assurance. As with the licensing of programs, this is an area of minimal Federal involvement. But, while the impetus for increased activity in counselor credentialing has arisen from State and local providers themselves, credentialing programs are not yet operating in a majority of the States. SAPIS information for fiscal year 1978 shows that 19 States reported that credentialed counselors provided services in their States. Only 8 States reported that counselors were credentialed by the State agency; others reported that they were credentialed by another organization, such as a statewide counselor credentialing body. However, between 1975 and 1978, the number of

credentialed counselors grew from approximately 600 to nearly 4,000. The initiation of a new Federal effort to study credentialing standards and encourage reciprocity among State credentialing systems may encourage even greater growth in the coming years.

Intergovernmental Networks of Alcoholism and Health Services

The growth in alcoholism programs throughout the 1970s has created a complex system of interrelationships among governmental units now providing funding for alcoholism services. As a result, State and local agencies (i.e., publicly funded programs on alcoholism) face an increasing number of policy and program choices regarding relationships among units of government that pay for, and demand accountability for, alcoholism services. Thus, it is important to examine relationships among Federal, State, and local governmental agencies within the context of critical policy and program choices for the 1980s.

Federal and State Relations

Federal and State relations in providing alcoholism services during the 1970s have revolved around three efforts: State formula grants, Uniform Act incentive funds, and the State Alcoholism Services Demonstration Project (SASDP).

In terms of dollar value, the most important program of intergovernmental Federal and State relations in the alcoholism service area in 1980 is the State formula grant fund. At present the amount appropriated by Congress for this program is \$56.8 million, although the President has requested a rescission of \$2 million for fiscal year 1980 and proposed complete elimination of funding for the formula grant program for fiscal year 1981. Thus this program may disappear entirely.

Second in terms of importance according to dollars is the Uniform Act incentive program. In fiscal year 1980, 32 States were receiving more than \$10.5 million through this mechanism. One-half of those States, collectively receiving more than \$4.5 million, are in their sixth and final year of funding and thus will no longer participate in the program beginning in Federal fiscal year 1981. Under this incentive program each State has been allotted \$150,000 plus an amount equal to 20 percent of its formula award for expenses associated with implementing the Uniform Act, which decriminalizes public intoxication. Several States, either through court decisions or by legislative mandate, had already decriminalized public intoxication before these Federal incentive funds were offered. The funds have clearly speeded the process in some States, however, and eased the burden in many others of increased demands on the treatment system as a result of providing care rather than imprisonment for public intoxication.

Third largest and newest of the programs of Federal and State relations is the Statewide Alcoholism Services Demonstration Project (SASDP) implemented late in 1979. At the present time five States—Connecticut, New York, New Jersey, South Carolina, and Michigan—are participating in this project, and NIAAA has announced that it intends to reopen the receipt of applications for other States as well as local government or regional groups. The State Alcoholism Authorities now administer some or all of the NIAAA project grant funds in their States, which NIAAA previously administered directly. This involves approximately \$4.25 million in project grant funds and an additional 10 percent (or \$425,000) which the SAAs receive for administrative costs. The purpose of the project is to provide increased technical assistance from the SAAs to local service providers, and through SAA monitoring to assure that NIAAA funds are spent in accord with State plans and in coordination with other State and local efforts.

Although all funding in the SASDP effort, except that used for State monitoring and administrative purposes, is spent for treatment and rehabilitation, the expenditure patterns for both Uniform Act grants and formula grants vary. In each program the bulk of the money is, however, spent for treatment and rehabilitation efforts. In addition to treatment and rehabilitation, Uniform Act money is spent for training, coordination, prevention and education, and program administration and operation. Formula money supports those same areas, as well as planning and research.

The two larger programs have provided the basis for a closer Federal-State working relationship which seems to be coming to fruition in the SASDP effort. With the possible elimination of the formula grant funds, however, there is a strong possibility that Federal and State relations will be disrupted greatly. In many States the loss of formula funds will mean elimination of many community-level service programs as well as elimination of State-level programs. Thus, until Congress decides what to do concerning the President's proposal for the fiscal year 1981 budget, future Federal and State relations in the alcoholism area are especially uncertain.

One aspect of Federal and State relations that will continue, but will not necessarily involve the State Alcoholism Authorities or NIAAA to any great extent, will be the requirement that planning for the use of Federal funds be included in the general State health plans. That State alcoholism plans be reviewed by the State Health Coordinating Councils (SHCCs) is a requirement now built in the National Health Planning and Resources Development Act, Public Law 93-641, as amended, which is based on the assumption that expertise and assistance as well as data will be available through the State Alcoholism Authorities. That assumption is brought into doubt by the proposed elimination of formula funds. The requirements, however, for general health planning and the inclusion of alcoholism in such planning will not be eliminated by any change in the formula programs. Thus, the future of Federal and State relations in the alcoholism services area may be determined by the

general State health plans rather than by, as it is now, the State alcohol plans.

Federal and Local Relations

The main relations of the Federal and local governments are through the NIAAA direct project grants authorized by Public Law 91-616. In some instances, these funds have gone to units in local government such as cities or counties to use directly or allocate to private nonprofit service providers. Although NIAAA project grant funds frequently go directly to such organizations rather than to local governments, local programing, whether operated by a local government or a private organization, has depended heavily on NIAAA project grant funds, particularly in serving populations that previously received no services. In the aggregate, volunteer efforts, as well as those funded by State and local governments, are much larger than those funded by NIAAA; however, the actual local efforts, such as those carried out at the community level, have found NIAAA funding to be especially important during the 1970s.

During 1979-1980, NIAAA has embarked on a joint effort with the U.S. Department of Housing and Urban Development in 10 pilot locations to deal with the problem of alcohol abuse and alcoholism in public housing. In addition, the SASDP effort has been expanded and changed to become the Alcoholism Services Development Program (ASDP) which will allow local government participation so long as there is extensive coordination with the SAA.

Entering the 1980s, an important new aspect of Federal and local relationships is coming into play in the alcoholism services network. That is the role of the Health Systems Agency (HSA). Health Systems Agencies are now required by Public Law 93-641 and its subsequent amendments not only to provide area plans for Federal uses of funds which include alcoholism, but also to review, according to the criteria specified in those plans, proposed alcoholism projects' use of Federal dollars. For many local communities the past relationship with the Federal Government has been a simple bilateral one—the local unit directly with NIAAA and only occasionally with a third partner, the State Alcoholism Authority. In the future this bilateral relationship will become much more complex, with the Health Systems Agencies playing a major role and the State Health Coordinating Councils and State Alcoholism Authorities possibly also having major roles.

Because the President's budget for fiscal year 1981 proposes the first significant increase in NIAAA direct project grant funding in several years, and local governments may receive some of that funding, Federal and local relations may increase in quantity as well as in complexity. Yet until the new funds are appropriated and start to flow to communities, it is impossible to predict how much of them will be received at the local level. Some of the project grant funds may flow to local projects through State Alcoholism Services Demonstration

Projects or similar efforts, but some will also flow directly from the Federal Government. Thus the Federal and local relationship is one of great importance during the 1980s.

State and Local Relations

The relationships of State and local governments in providing alcoholism services follow the same lines as the Federal and State relations or Federal and local relations, in that there are two principal areas of activity: funding and planning.

As might be expected, the pattern of State and local relations varies greatly from State to State, with almost as many variations as there are States. Some general patterns are evident, however. Health, including health planning services of the States, has traditionally been a responsibility of county governments; thus, many of the planning efforts are based on counties as the principal unit, and many allocations of State funds go to county governments or to regional units composed of several counties. State planning for alcoholism services, as distinct from State planning to meet Federal requirements for alcoholism services, also tends to follow county lines.

Just as NIAAA allocates funds for the States on a formula basis, a few States have allocation formulas for units of local government to provide funding for alcoholism services. In addition to formula allocations, States provide funding to local programs through a project grant or contract mechanism for alcoholism services with funding for comprehensive health service providers, mental health service providers, and programs that provide only alcoholism services. As is the case with Federal funds, the recipients of these project funds are at times local governments and at times private not-for-profit providers.

State and local relations for prevention and education projects have frequently involved local school districts. As with treatment and rehabilitation efforts, prevention and education efforts show patterns that vary greatly from State to State, in part because the pattern of organization for public education varies greatly. Some States have many local school districts which encompass very small areas; other States have county school districts which encompass much larger areas. Regardless of the pattern, it is important to note that most State Alcoholism Authorities do have working relationships with the local educational systems. This often takes the form of the SAA's providing literature, films, or technical assistance, and, in some States, funding for school-based staff who are involved extensively in prevention efforts.

Federal, State, and Local Relations

Although Federal, State, and local relations have been mentioned in passing above, these relations are important in their own right. Formula funds are used in practically all States for grants to local units of government for the provision of services, thus creating a flow of dollars

from the Federal level to the State and then to the local community. The State Alcoholism Services Demonstration Project has opened a new era in the interrelationships of Federal, State, and local governments by providing each with different responsibilities for management and delivery of alcoholism services. Under that mechanism Federal project grant dollars flow from the Federal Government to the State or local government and then in turn to the local community.

Federal, State, and local relations often involve planning as well as funding and State health plans are expected to incorporate the efforts of the HSAs in planning alcoholism services as well as other health services for their respective areas.

Planning and funding are used as mechanisms to direct important programmatic efforts. Actual program content at times is based on what a local program has developed. Information is in turn provided to a State, then to NIAAA, and from there it is disseminated throughout the country. At other times programmatic developments have originated at either the State or Federal level, and the intergovernmental network provides not only for dollars and plans, but also for ideas on dealing with the problems of alcoholism. Although the dollars and plans are perhaps the most visible part of the intergovernmental network, the programmatic aspects are perhaps more important. But dollars and plans are necessary for the programmatic aspects to work. Thus changes, such as those previously discussed, that will come in the 1980s in funding and planning among these levels of government can be expected to change the flow of programmatic ideas throughout the network as well.

Relationships with the Voluntary Sector

Despite the growth in public and private funding for alcoholism programs through the 1970s, State and local alcoholism agencies continue to rely on volunteers as a major portion of a community's total capacity to provide alcoholism services. Volunteers working with State and local programs in every State greatly enhance the capacity of the programs to provide needed services. These include a wide range of programs from treatment to prevention, education, and training, as well as legislative and political action within the State. Though in some cases the role of volunteers has changed as a result of the availability of public and private dollars to support treatment personnel, their importance to the system is no less now than it was in earlier years. They not only are a part of the vast network of service providers, but are advocates for many needs in the alcoholism field. In policy and program development at Federal, State, and local levels, important initiatives that otherwise would not be possible are accomplished as a result of cooperative efforts with the voluntary sector.

Among the States there are a variety of formal and informal mechanisms for relationships between State and local programs and

volunteers. Many State Alcoholism Authorities contract with local or statewide voluntary associations for expertise in certain program areas, especially prevention. Informal and formal relationships also exist for referral of persons in need of treatment. State and local agencies often designate volunteer coordinators to work full time on increasing citizen involvement in alcoholism issues. Programmatically, volunteers work in every aspect of the service system from emergency medical and treatment services to aftercare, prevention, and education efforts, and provide advocacy for legislative and policy issues within the States.

Relationships with volunteers continue to be developed, refined, and enhanced in 1980. In many cases, historical relationships are identified and capitalized upon. As a result of the planned expansion of the Federal initiative in volunteer resource development, through the Volunteer Resource Development Program (VRDP), formal mechanisms for cooperation with the voluntary sector are increased. Also, State and local programs are taking initiatives to organize and focus the valuable resources of volunteers on new service areas needed in the community.

Following are a few scattered examples of cooperative activities with volunteers that exist throughout the service system.

In Vermont, efforts focus on preserving and enhancing the historical role volunteers have played in providing treatment services. In that State, volunteers work in emergency detoxification and treatment facilities located in rural areas where paid program personnel are few. In the more populous areas where treatment and emergency services are handled by paid personnel, volunteers assist in counseling and aftercare, as well as in education efforts.

The process of bringing volunteers in closer contact with the State and local service systems is often initiated by the SAA to enhance statewide service capacity. For example, in Florida, the State Alcoholism Authority recognized that the State's ability to provide adequate services depended on volunteers' playing a greater role in education and program development. The State set up a Citizens Commission on Alcohol Abuse, charged with identification of volunteer resources throughout the State and determination of how best to organize and use the talents of the volunteers to complement program activity. As a result, the State now has an organized volunteer network, assisted by regular communications between paid providers and volunteers; and new programs are being developed to address the unmet service needs of the elderly by paid providers and volunteers working together.

Twenty-nine States have taken advantage of the Federal initiative to support the Volunteer Resource Development Program (VRDP). With the assistance of small grants from NIAAA, States are able to plan and develop statewide volunteer networks to focus volunteer resources where they are most needed, and to train volunteers in skills needed to complement treatment services. The program has provided a useful means of increasing State capacity to provide alcoholism services. As with other aspects of recent Federal initiatives in alcoholism, the VRDP

program has since its initiation enhanced the programs that it was intended to support.

The history of Federal, State, and local government involvement in alcoholism shows that advocacy is one of the most important and successful roles of volunteers. Present relationships between State and local programs and volunteers also benefit from the continuing involvement of volunteers as advocates in important program, policy, and legislative issues affecting alcoholism in 1980. One example of an area with the greatest potential need for advocates is itself built on the concept of voluntary citizen participation in health planning—the National Health Planning and Resource Development program, authorized by Public Law 93-641. Inclusion of alcoholism service needs in local and State health plans relies on the advocacy of citizens within health systems areas. In California, for example, a county affiliate of the National Council on Alcoholism has set as one of its goals the inclusion of a section on alcoholism within the State health plan developed under Public Law 93-641. The Council is also active in providing information about alcoholism to health planning staff, advocating for service needs, and recruiting persons knowledgeable in alcoholism issues to serve on government boards and committees.

Other areas in which State and local alcoholism agencies rely on volunteers are State legislative efforts, such as mandatory insurance coverage for alcoholism, State appropriations for alcoholism services, and policies to eliminate discrimination against alcoholics in housing, employment, or medical care. In short, volunteers do not just complement a total system by providing services; they are the working resource for continuing public awareness about alcoholism. There is a need in the 1980s for continued development of relationships between State and local programs and volunteers to attempt to bring all the elements of the service system into greater consonance, and thus to improve capacity to meet the needs for services in the most efficient way.

Fitting Into the Health Care System

Although State and local alcoholism programs have struggled to develop separate identities from other health care and social services efforts, one of the goals of practically all State and local programs is to be coordinated with the general health care system, particularly that portion that is publicly financed. Although at one time publicly financed health care meant the county hospital, today the Federal Government is the major public entity providing health care financing, with State and local governments usually providing matching dollars. Federal financing includes medicare under title XVIII of the Social Security Act, generally for those over 65 as well as certain other specified groups, and medicaid under title XIX for those who are receiving general income

assistance as well as others defined as medically indigent. In addition, health maintenance organizations (HMOs) are given some Federal financial assistance and there are the specialized federally assisted categorical health financial participation in capital costs, notably in hospital construction under the Hill-Burton Act, has also been a major Federal program.

The attempts of State and local alcoholism programs to fit into these publicly financed general health care efforts are of two sorts. Often the two are pursued simultaneously by a single State or local program, even though there is some logical contradiction in pursuing both efforts at the same time.

The most common effort of a State or local alcoholism program to fit into the more general health care system is by seeking financing from that system. Thus, some State Alcoholism Authorities have been successful in convincing other State officials that the State medicaid program, which is jointly financed by the State and Federal governments, should contain provisions determining provider eligibility so that local alcoholism programs, including those that do not follow strict medical models, are eligible for reimbursements just as other medical care providers are.

The difficulties that State and local alcoholism programs have in pursuing medicaid assistance are many. They range from relatively simple, though expensive, problems of meeting fire safety code standards for the buildings in which the programs are housed to much more complex ones concerning the appropriateness of service provision by persons without medical training but trained in counseling by other than traditional academic means. In spite of the many difficulties of securing necessary certification for participation in medicaid programs for both organizations and individuals, State and local alcoholism programs almost uniformly seek such participation. For many, participation is important not only for the funds it can make available but also for the status and recognition it can give to the alcoholism program as being an equal with other health care providers.

The other sort of participation in publicly financed health care efforts sought by State and local alcoholism programs is often pursued but with more ambiguous feelings by those seeking it. This effort involves assuring that alcoholism services are made available in all publicly financed health care institutions without discrimination against alcoholics. There is a desire to make sure that medical education provides all physicians, nurses, and other medical personnel with at least minimal education in how to recognize alcoholism and make appropriate referrals, and that alcoholism treatment is through appropriate counseling methods and not through inappropriate prescribing of other psychoactive drugs. The effort also involves assuring that the health care community at large recognizes that alcoholism is a disease to be dealt with and treated by appropriate specialists like any other disease and is not an indication of moral weakness or criminality.

These efforts are pursued with some ambiguity because success ultimately might mean the end of all but a few separate specialized categorical alcoholism programs of the sort largely staffed by recovering alcoholics. State and local program officials clearly do not wish to have these separate alcoholism programs diminished, but recognize at the same time that it is difficult to take these programs which have nonmedical and at times even antimedical orientations and make them part of larger medical institutions that provide other sorts of health care.

State and local alcoholism programs are perhaps less concerned with the privately financed health care sector than they are with the publicly financed one, in part because most persons they serve are also likely to be seeking their medical care services in publicly funded programs rather than from privately funded ones. There is, however, one major area of exception. That is in private insurance coverage for alcoholism.

Just as State and local programs seek participation in State medicaid efforts, they also seek to assure that privately purchased health care insurance packages make provision for coverage of alcoholism services on the same footing as coverage for other diseases. The programs are interested in private insurance coverage for the financing it may offer, but there is not a total consensus on promoting mandatory coverage. Some fear that widespread coverage will bring private, profitmaking alcoholism service providers into the field and that some such providers, particularly those with an exclusively or largely medical orientation, may provide attractive but high cost services which are no more effective than the lower cost services of publicly financed providers. Because of the attractiveness of the medical model to both insurance carriers and the general public, it will thus be more difficult for the nonmedical, low cost programs which rely partly on public financing to succeed and continue providing services.

The exact position of State and local alcoholism service providers regarding private health care financing for alcoholism service programs will therefore be developed slowly over the next several years. There is the desire to fit into the general mainstream of health care provision to receive not only the dollar benefits but also the symbolic recognition. At the same time, the desire of State and local alcoholism programs continues for categorical recognition of alcoholism as a separate disease with unique needs for treatment.

Fitting Into the Social Services System

State and local alcoholism programs, because of the nature of the treatment and rehabilitation services provided, are both more than and less than health care programs. They are less than health care programs because of the avoidance of exclusively medical approaches to the disease of alcoholism. At the same time, the medical aspects of

alcoholism and its complications are recognized. These alcoholism programs are more than health care programs because many of the services they provide fall within the broad category generally called social services.

As a result, some State and local alcoholism programs have sought to fit into the social services mainstream rather than to seek a place in the health care mainstream. The social services mainstream is perhaps most easily defined in the context of title XX of the Federal Social Security Act. Title XX authorizes the use of Federal funds, which must be matched by a State or local program, to purchase certain kinds of protective and rehabilitative services, generally provided by persons who are specialized counselors or therapists. Thus, many alcoholism programs fit into title XX definitions of providers more readily than they do into the physical health definitions of titles XVIII and XIX. Provisions in the law generally known as the Hathaway Amendments, after former Senator William Hathaway of Maine, have made it explicit that nonmedical detoxification services and rehabilitative services in halfway houses are eligible for reimbursement under title XX and that the confidentiality protections that apply to federally funded alcoholism services also can be applied under title XX. Regardless of the exact legislative status of those provisions in title XX, State and local alcoholism programs have established as a practical matter that they are social services programs, and are not exclusively health service providers. Although the distinction may seem a minor one, it is important because it provides an identity for State and local alcoholism programs in an area where the lines of status and the detailed requirements of service provision are less rigid than in the area of physical medicine. In addition, the identity provides some financing through title XX and similar mechanisms. Also, persons receiving services are either automatically or more easily eligible for a broad variety of other social services provided at public expense—e.g., income assistance, employment assistance, and housing assistance.

Many persons provided services by State and local alcoholism programs are not necessarily in need of other forms of public assistance. Working with other social service providers for those persons who do need such services is, however, an important part of the effort that State and local alcoholism programs make. Both State and local agencies commonly have vocational rehabilitation or job training specialists. At the local service provider level, it is also common for counselors to assist clients in receiving income or housing assistance if they need it and are so entitled.

Thus, fitting into the general social services system is one area of great accomplishment for State and local alcoholism service providers. Since in fact the social services system is not one simple system but many diffuse and overlapping ones, that accomplishment can be easily underrated. To underrate it, however, is to ignore the fact that the stigma of alcoholism in the past often excluded alcoholics from other social services and in some instances still does. For example,

intoxication often remains the grounds for expulsion from some social services programs such as job training, even though formal agency policy may be to recognize alcoholism as a disease. Thus, in this area, much has been accomplished, but much remains to be done. Though alcoholics are recognized as social service clients, they are often considered by too many as not particularly desirable clients.

State and local alcoholism programs have done a great deal to assure that their clients receive many types of social services; the two most common of these are income and employment assistance. Income assistance to the alcoholic and his or her family is frequently viewed as a necessary part of rehabilitation, since for some the stresses of inadequate income contribute to continuing alcoholism. Assuring that alcoholic clients receive income assistance just as other eligible individuals do is also important to State and local programs as a means of reducing discrimination against alcoholics. Most income assistance programs, whether at the State or local level, have considerable Federal financial participation. The role of the State or local administrators of the particular financial assistance program, whether it is labeled public aid, welfare, Aid to Families With Dependent Children (AFDC), or has some other label, is implementation of Federal policies rather than independent policy setting.

State and local alcoholism programs play a similar brokering role between State and local rehabilitation offices and their clients, as well as between clients and Comprehensive Employment and Training Act (CETA) programs. Employment assistance programs range from those that teach job readiness skills, to those that provide detailed training for specific jobs, to those that provide assistance only to already experienced and skilled workers in finding new positions. Alcoholics and alcohol abusers fit into all these categories. Given the importance of paid work and productive activity in American society, having a job or being actively involved in training for a job is an important part of rehabilitation for alcoholics.

In some locations the stigma problem continues to exist, with alcoholics being seen as less deserving of employment assistance than others who are eligible for the same programs. Thus, in addition to being brokers, State and local programs must see to it that employment assistance programs do not exclude alcoholics as a matter of policy or practice. Brokering means providing not only referrals but also advocacy by giving training and information about alcoholism to those directing other programs such as employment assistance.

Some alcoholism services programs at the State and local levels provide direct employment assistance themselves; however, most rely on referrals to others. Income assistance is provided also through referral. There is thus less ambivalence in the alcoholism services system about the role of alcoholism programs in relationship to these social services programs than to other medical care efforts. Because of a less competitive relationship with social services providers than with medical care providers, and because the boundaries are less rigidly

defined, it is likely that State and local alcoholism programs will continue to work with income assistance and employment programs in the years to come, much as they have in the years past.

Working with the Criminal Justice System

State and local alcoholism programs, in addition to seeking relationships with health and social services systems, also have a responsibility to work with the criminal justice system. Alcoholism service providers and increasingly those in the criminal justice system recognize that alcoholism and public intoxication are not in and of themselves crimes. However, they also recognize that many persons involved in the criminal justice system also have problems with alcohol. Surveys of local jails and State correctional institutions indicate that a significant percentage of the inmates at any one time have alcohol problems, even though the number who are in prison or jail for offenses such as driving while intoxicated or more serious offenses committed while under the influence of alcohol is much smaller (Barton 1980).

Several States have initiated programs for treatment of alcoholism within their correctional institutions. In some States, the only programs available are AA groups; in many other States, programs with counselors similar to those in community-based programs are available. In these cases the work of the counselors is complemented by AA groups. Local jails, especially those that hold individuals for several months, also provide some treatment in addition to AA groups. In both types of institutions the need for treatment is generally far greater than the amount of services provided.

Given the scarcity of resources for alcoholism services, State and local programs often find it relatively easier to deal with persons in the community at large than with those caught up in the criminal justice system. Increasingly, however, State and local alcoholism agencies, through their planning mechanisms, are expressing the need for services in criminal justice institutions. At present there is some controversy as to whether the categorical programs that fund alcoholism services should provide funding for correctional institution programs, or whether the correctional institutions should provide the funding themselves. The controversy seems to center on a desire to have someone else pay the bill, but there is agreement on the need for the services to be provided. Violence within correctional institutions is all too often associated with the use of illicitly obtained alcohol, and the failure of the institutions to provide treatment for alcoholism has at times resulted in deaths. Thus this area remains an important need for State and local alcoholism program action.

Policy Changes and Decisions in Intergovernmental Networks

The complexity of intergovernmental networks involving State and local alcoholism programs may become somewhat simpler in the next few years as some of the separate funding patterns either end entirely or lose their importance. It is unlikely, however, that the complexity will disappear. State alcoholism programs may face the choice of rejecting Federal leadership if Federal funds that flow to and through States disappear or decrease significantly. Similarly, local programs could become much more reliant on the Federal Government and therefore much more directed by it if Federal programs bypass States entirely. Conversely, the States may have to make a choice about accepting stronger Federal leadership if there are dollars to go with it, and local programs may accept stronger State leadership if the State is providing, both with its own revenues and Federal revenues, the source of funding for the local programs.

Although it is theoretically possible that in any given community three sets of programs, funded separately by Federal, State, and local units of government, could be built up, such a possibility appears extremely unlikely. Economic pressures alone make it much more likely that the policy choice in most communities will be for a single network of alcoholism services with that network composed of and financed by Federal, State, and local efforts. Logic would dictate, in more places, a simple linear relationship, with policy and funding flowing from the Federal Government to the State government and through to the local government for ultimate provision of services. Just as three separate systems are unlikely, however, it is equally unlikely that such a precise system will evolve in all places in the country. Some direct Federal and local relationships that do not involve States will continue. Likewise, there will be State and Federal relationships that do not involve local programs, as well as State and local relationships that do not involve the Federal Government. Many of these bilateral relationships will, however, be the exception rather than the rule, with participation by all three governmental levels at least in policy setting in most programs.

The most important policy decisions, therefore, deal with the relative magnitude of the efforts by State and local programs in relationship to the Federal effort. Undoubtedly, the States collectively will continue to do more than the Federal Government. In the States in which local governments have traditionally been heavily involved in the provision and funding of alcoholism services, they will continue to be so; in other areas where local government participation has been minimal, that will continue to be the pattern. Since decisions concerning the availability of resources for alcoholism programs at all three levels are likely to be influenced by other economic pressures and costs of other government services as much as they are by the needs and costs of alcoholism services, policy choices from the perspective of State and local

alcoholism programs will continue to be distorted ones. In the four-fifths of the States where alcoholism programs are combined with drug abuse programs, policy decisions are more likely to concern themselves with the needs of both fields as well as with the needs of only alcoholism. In the one-fifth of the States where there is not such a combination, one important policy choice that will affect the pattern of intergovernmental networks is whether such a combination should come about. At the local level, combination is likely to have less impact since the needs of the persons being served will largely determine what the programs do. The impact on the local level thus will come from choices made at State and Federal levels about the nature of funding and how narrowly defined the categories are.

If State and local programs continue the pattern begun in the 1970s of providing an ever-increasing share of the Nation's total resources devoted to alcoholism services, it is likely that the policy leadership of those programs will also shift to State and local programs. It is probable that national programs and perhaps even national standards will be set, but they will be set not by the Federal Government for the field but by the field for itself, through participation in federally financed national efforts. Thus, intergovernmental networks that exist in the coming years are likely to be more pluralistic in nature, with participants competing with one another for leadership authority rather than having clearly defined leadership and junior participant roles.

Although this pluralism and competition may make State and local alcoholism programs rather bewildering for outside observers, the long-term result can be strengthening of the programs as decisions are reached and consensus is built on what alcoholism services should be provided and how they should be provided. If the competition in the intergovernmental networks is purely over power or "turf," over personality, or over issues primarily of symbolic significance rather than significance in terms of impact on the life of the clients, the competition is likely to be extremely costly and perhaps even destructive. If the competition can, however, be on more substantive issues which have major impact on what services are provided, it can be a healthy one through which the field can develop strength and identity.

Moving from Categorical Programs

As State and local alcoholism programs become more integral parts of either larger health systems or larger social services systems, it will be important that the State and local programs have strong identities developed through intergovernmental networks. Such strength will assure appropriate alcoholism services, whether they are provided by separate programs or as part of a larger health or social services unit. These larger units deal with a wide variety of separate identifiable

problems, all competing with one another and with alcoholism for resources and attention.

In each State and local program, policy choices will need to be made and remade about institutional arrangements and affiliations with other participants in the health system or social services system. No clearly ideal organizational or institutional arrangement exists, even on the State level, and certainly not on the local level. The guidelines that are available do suggest that too close an identity with either the social services system or the health system can result in total loss of identity and consequently of the ability to serve the alcoholic. Conversely, total isolation from both or either of the health or social services systems on the State or local level can also mean loss of the ability to provide adequate services. Between disappearing through merger and becoming inconsequential because of isolation, there are many points at which the State or local alcoholism program can find, at least temporarily, an appropriate home. Among the States alone there are at least half a dozen major types of structural, organizational arrangements, and there does not appear to be a high degree of correlation between strength of program and particular type of organizational arrangement. Strength of program depends, it appears, on strong leadership over a period of years as well as constituency strength. The pattern for the State level can be multiplied many times over on the local level.

The success of State and local programs in moving from narrow categorical definitions into closer alliances with similar programs and into larger categorical units will depend not only on the intergovernmental networks that exist but also on nongovernmental efforts. It is in that area that State and local programs must make other important choices and decisions.

Working with the Private Sector

Many State and local programs in the alcoholism field have grown from the voluntary base that is symbolized in this country by Alcoholics Anonymous to one that encompasses other organized groups as well as many individual volunteers. The voluntary base of alcoholism services on the State and local levels has developed from one that relied strictly on private charity to one that now frequently combines private charity, the efforts of individual volunteers, and public resources used by private nonprofit organizations. Many of the State and local affiliates of the National Council on Alcoholism are examples of this effort; they indicate the strength that the combination of public resources with the independence of private charity and the energy of volunteers has brought to the alcoholism field.

The relationship between State and local programs and State and local voluntary bases is frequently one of tension, since all are trying to provide leadership. In most instances the leadership directions chosen

and followed are the product of joint efforts rather than a single effort of either group. Thus the alcoholism field is strengthened itself and in its relationships with other health and social services programs.

The exact nature of relations between the voluntary base and State and local programs will vary over time as well as geographically. State and local programs, if they are to continue, must continue and increase their recognition of the voluntary base that existed in most places long before the State and local programs came into existence. This is true even though public resources from the State and local programs now assist in supporting voluntary efforts. Thus, even when there are disagreements, State and local program efforts to strengthen the voluntary base are important to the continuation of alcoholism services.

One additional key area for important policy choices and decisions by State and local programs concerns their relationship with business and industry. The 1970s saw the very rapid development of occupational programs. Many State and local governmental programs themselves provide occupational services for the entire State or local government of which they are a part. Often they have provided assistance and encouragement for occupational programming efforts in private business and industry. Occupational programming efforts on the national level provide an opportunity for State and local programs to participate in national programs that originate with the private sector rather than with the Federal Government. Thus, the efforts of business and industry in the occupational area make it possible for State and local programs to have another base in addition to the traditional voluntary base and further strengthen themselves in providing services for alcoholics.

The efforts of State and local programs in the occupational field vary tremendously in scope throughout the country, but all seem to have recognized the importance of the field and its potential for strengthening the field as a whole. Important policy choices and decisions to be made concern how roles will be defined and resources provided for occupational efforts, rather than basic questions about the very existence of such efforts. Clear patterns have not yet emerged, but it is likely that the pragmatism of the alcoholism field will mean that many patterns develop in State and local programs in the coming years. Although the variety of patterns offers the possibility of dissension, it also offers, in this instance as in all others in alcoholism, an opportunity for growing strength if disagreements are about substantive rather than symbolic issues.

Concluding Remarks

Advances in medical research can and will provide State and local alcoholism programs with more information about causes and origins of alcoholism, and perhaps even better methods of prevention, treatment, and rehabilitation. Organizational diversity and frequent changes in

organizational patterns are likely to remain the rules, however. State and local programs will find policy decisions made for them by others in the health and social services fields and will find it necessary to fight to be able to make their own decisions. Frequently the choices available will not be ideal ones but simply a matter of choosing that method or direction which is least undesirable. The public programs at State and local levels that have developed over the last 35 years, and most especially in the last decade, are now a major component in a national alcoholism service system. They will continue to have a major role, but definition of that role and its relationship to the roles of others in the field as well as to the Federal Government will be subject to ongoing modification.

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Chapter 11

The Private Sector

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Abstract

The role and responsibility of the private sector (non-governmental organizations) in combating alcoholism and alcohol-related problems are discussed. An historical perspective of the public and private sectors' involvement in the alcoholism movement within the U.S. is presented. The private sector network (treatment agencies, voluntary agencies, and special interest constituencies) of alcoholism services is described, and trends in networking and resource sharing are outlined. These trends indicate that both the public and private sectors are possibly coming to recognize that it is the role of government to develop that mechanism which can maximize the public/private partnership. Processes must be developed to readily identify private sector resources and bring them into a working partnership with the public sector. Mechanisms for technology sharing and mutual assistance must be developed which will be flexible enough to enhance and encourage private initiative while providing a framework for systematic and cost-effective service delivery.

Introduction

The 1967 report by the Cooperative Commission on the Study of Alcoholism made hopeful reference to the rate of nongovernmental organizations in combating alcohol-related problems. It suggested that "concerted efforts by nongovernmental groups will serve as a major stimulus to greater action by various levels of government" (Plaut 1967). At that point in the development of the alcoholism field, such efforts were being mounted. They did result in governmental action to increase alcoholism services.

During the 1970s, the alcoholism field expanded at a tremendous rate, with public dollars funding a wide range of programs from detoxification of the public inebriate to behavioral research into methods of preventing alcohol abuse. While the result of this governmental intervention increased resources to combat alcohol problems, it, albeit unwittingly, created an aura of politics within the field. This resulted in a reliance on government to plan and implement programs in the best interests of the clients.

By the end of the decade, however, the rise of a multitude of special interest constituencies to advocate for their program interests suggests that government was not perceived as meeting all the needs of its citizens. It is interesting to note that private sector initiatives appear to be experiencing a renaissance toward the close of the decade.

This same cycle is reflected in the literature of the alcoholism field. Until the last decade, the literature dealing with alcoholism programing concentrated on private sector initiatives since there was little else to study. During the past 10 years, however, the nongovernmental role has been deemphasized, and references to this sector can be found largely in the literature of the generic health field.

A general review of the literature, most especially an analysis of the differing emphasis over time in the periodical literature, provides interesting insights into the emerging alcoholism field and the factors influencing it. In general, research literature on the private sector is practically nonexistent. Whether one is discussing private treatment agencies, or private voluntary organizations, the available data are very limited. This situation itself suggests that a process be developed to identify, quantify, and qualify private sector initiatives.

There are several possible explanations for the present lack of data. First, many private sector programs, by definition, are not tied into the public funding network. Therefore, it is likely they would in many cases not be picked up in the various information gathering processes—NDATUS, SAPIS, NAPIS—which serve as one major data base for comparative research. Until very recently, there was a preoccupation with the publicly funded programs which is reflected in the literature. Since public agencies fund the vast majority of research done in the alcoholism field, it follows that emphasis would be put on discussing, assessing, and evaluating programs using public dollars.

Apparently, no survey research has ever been done to ascertain the resources of the private sector. Perhaps no method for retrieving information from private sector programs has been available. The private sector is not tied into governmental monitoring, and no one mechanism exists to coordinate its activities. A single venture into surveying private sector resources for primary prevention in one State (Massachusetts) has been successful, but the State-level private agency that undertook the task was already perceived as a lead agency for private sector activities.

Surveying the state of the art of the private sector requires focusing on particular program activities associated with this sector rather than on the categorical agencies themselves. No literature can be classified under the general heading private or voluntary sector. However, it is possible to approach the subject of the private sector through factors that affect it: employee assistance programs, health planning, and private funding sources. The literature of private sector and voluntary activities in the generic health system is of some value in suggesting trends that may be applied to the alcoholism field.

The single most fruitful source of information regarding the private sector comes from the organized constituency groups in the field of alcoholism. These appear to be the only vehicles for the formal inclusion of the private sector in organized activities of the alcoholism field. Much of the following discussion is based on a survey of the organized alcoholism constituency. It should be noted that because of the paucity of literature and hard data regarding private sector activities per se, the following narrative is based largely on anecdotal and experiential material collected by the author.

Definition of Private Sector

At the outset, it must be stated that the rubric "private sector" is a cumbersome one to deal with. The strict interpretation of private sector is agencies and programs that are not controlled by governmental agencies—local, State, or Federal—and that derive their revenue from nongovernmental sources. However, this definition cannot be applied broadly in the field of alcohol abuse and alcoholism. "Private sector" in this field commonly refers to agencies and programs that are not directly contracted or managed by governmental authority but may receive some or all of their funding from governmental sources. The overwhelming majority of agencies delivering services to alcoholics are private, nonprofit, community based corporations. However, those that rely solely on public dollars through grants and contracts are assumed to be directly influenced by these public funds and are therefore commonly classified as in the governmental sphere. By process of elimination, the private sector becomes those organizations that do not receive appreciable amounts of direct public dollars.

Several distinctions exist within the private sector. There are private profitmaking agencies as well as private nonprofit agencies. The distinction between these two categories lies in their constitutional structure and their status with regard to income and taxation. A far more important identifier, for the purposes of discussing the private sector, is the primary function of an agency and its mission in terms of the delivery of alcoholism services. For instance, a general hospital, incorporated as a private nonprofit corporation, may provide a series of specialized alcoholism services although its primary function is general health care. A similarly private nonprofit corporation may have been chartered for the single mission of providing alcoholism services. The alcoholism field is typified, and perhaps enhanced, by this range of private multidisciplinary, multipurpose agencies. The balance of the private sector is considered to be those agencies which deliver services in the alcoholism field but whose activities are viewed as outside the governmental sphere by virtue of their nonreliance on public funding.

The most outstanding distinction within the field is the designation of voluntary agency, which is probably the most misunderstood and

misused designation as well. Historically, voluntary referred to a private nonprofit corporation that utilized volunteers in programs of public information and education about alcoholism and the need for services to alcoholics. These agencies did not receive public funds and were accountable to the constituencies that supported them. In many instances, that description still applies. However, at the present time many voluntary agencies do receive some public funds, and many of them have expanded their programs to include direct treatment services to alcoholics as well as other service areas such as prevention and organized citizen advocacy.

The distinction between voluntary and other private sector agencies cannot be made on the basis of function, and can seldom be made on the basis of legal structure. It can be made only on the basis of agency emphasis on accountability and participation by the community served. Therefore, for the purposes of this discussion, voluntary will refer to those agencies whose primary focus is citizen participation in alcohol-related efforts.

Historical Perspective

This lack of definition in the private sector has its origins in the recent history of the alcoholism movement. While the social problems resulting from abusive use of alcohol had been recognized in some quarters for centuries, it was not until the 19th century, with the account of the Washingtonian Movement, that alcohol addiction became a legitimate concern and social issue (Levine 1978). By the 20th century, drunkenness was recognized as a problem for society; in many quarters it was accepted as an illness (Bacon 1947). Alcohol-related problems were handled as one of a whole range of difficulties encountered by clients of social welfare agencies. Thus, existing welfare agencies, churches, charity hospitals, the Salvation Army, provided the bulk of services to alcoholic clients and their families.

This situation continued until well into the 1930s. With the rise of a voluntary self-help organization, Alcoholics Anonymous (AA), the alcoholism issue began to receive greater public visibility and credibility (Kurtz 1979). Beginning with a small group in 1935, and growing rapidly through the late 1930s and early 1940s, Alcoholics Anonymous served to demonstrate that the illness of alcoholism was a primary problem for many people rather than a complication arising from other social ills. AA furthered the theory that alcoholics could be successfully arrested in their illness and returned to roles as contributing members in the community.

While Alcoholics Anonymous devoted itself to the treatment of the alcoholic, by the mid-1940s another group arose to bring the message of support for alcoholism services to the general public. In 1944 the National Committee for Education on Alcoholism (later National Council

on Alcoholism) was formed. This organization, too, was made up of volunteers dedicated to increasing understanding of and support for the disease concept of alcoholism.

In these beginnings lie factors that influence the alcoholism field today. This field differs from other public health areas in that the private and voluntary sectors were actively concerned with alcoholism services well in advance of any governmental activity. In fact, a case is often made that it was the success of volunteer efforts at public education that resulted in eliciting governmental response to citizen demand for services. By the early 1950s, 38 States had recognized alcoholism as a public health issue and authorized governmental bodies to develop measures for dealing with the problem. The private sector still had the responsibility for the bulk of direct services, however. In fact, it was not until the National Institute on Alcohol Abuse and Alcoholism (NIAAA) was created that significant public dollars began to be directed to the problem of alcoholism.

The influx of governmental money in the last decade changed the treatment system from one based on volunteer groups and isolated private facilities to a more bureaucratized and professionalized series of institutions (Room 1978). This change was not effected without trauma. The private sector changed from being the only arena for playing out alcoholism issues, the only policymakers and opinion leaders, to sharing these roles with new programs growing out of the influx of public funds. While the governmental sector had a role mandated legislatively, the private sector was left to fit itself in wherever possible to the new public initiative. Governmental intercession created a rapid growth in recognition and support for the legitimacy of alcoholism as a disease; it institutionalized alcoholism. However, the resulting influx of individuals and ideas generated by this new money created an institution that has been compared to the "tower of Babel" (Bacon 1947). Where once there had been a single voice—voluntary—advocating for alcoholism services, there were now a myriad of special interest groups with distinct agendas based on particular needs. Clinicians, behavioralists, consumers, providers, bureaucrats, citizens, treatment sector, prevention sector—each group was striving to put forth a particular position.

While these divergent groups undoubtedly reduced the parochialism of the traditional alcoholism movement, they also contributed to making the newer movement a highly political sphere in which to operate.

It is safe to say that by the middle of the 1970s the private sector was largely overshadowed by the public sector. The public sector had a mandated responsibility for the prevention and treatment of alcohol abuse and alcoholism, and the funds to support it. The private sector was largely represented by the voluntary agencies which had continued their traditional role as information disseminators. That is not to say that other private sector programs did not exist. They were functioning in isolation from each other and largely outside the sphere of public attention.

Private Sector Network

It is difficult to impose a systems model on private sector activities. For valid historical reasons, private sector alcoholism services developed in isolation, in response to demands perceived by individual agencies on the local level. Where private treatment services are observed, they should be viewed as a classic example of free enterprise combined with individual altruism. In other words, services developed either as a result of a perceived demand which could be demonstrated by adequate finances to pay for the service, or as a result of a perceived need which individuals were committed to find resources to meet.

The roots of current private sector activity are to be found in the historical changes the alcoholism field has undergone over the past 40 years. As was noted earlier, private sector agencies pioneered in the provision of services to alcoholics and their families. Initially, these services were adjunctive in nature. That is, alcoholism services were provided as part of a total program aimed at ameliorating social problems. Alcoholism was considered a manifestation of such problems, not a problem in its own right. Beginning in the 1930s, and steadily increasing in numbers since then, specialized alcoholism treatment has come into its own. It has already been noted that to be considered within the private sector an agency must operate mainly outside the realm of government funding. In the 1950s and 1960s, this was not difficult. However, throughout the 1950s and 1960s, the nongovernmental sector, specifically the voluntary sector, engaged in a campaign of public education about the disease of alcoholism and advocated across the country on the local, State, and national levels for government support in developing programs to combat this disease. The campaign was led by representatives of the private sector. Concerned citizens, treatment programs, local voluntary alcoholism organizations, and, most particularly, the National Council on Alcoholism successfully advocated for a governmental initiative in the area of alcoholism.

In 1971, the National Institute on Alcohol Abuse and Alcoholism became operational, with a congressional mandate to prevent and treat alcohol abuse and alcoholism. NIAAA was provided the finances and a funding process to encourage State governments to join in the initiative.

The private sector, as a designation, originated from this point. Agencies were offered a choice: They could opt into the governmental process with the concomitant funds available for the program efforts government chose to support; or they could pursue their own program goals, and find their own sources of funding.

"Private sector" is a designation for these areas beyond the sphere of attention and interest of the general public. Until 1971, it was the *only* sector. Since government agencies fund the majority of programs in the alcoholism services network, private sector refers to the unknown and relatively unacknowledged programs of the field. Until recently, the only agencies of the private sector receiving public recognition were the

voluntary agencies. However, there are two networks operating in the private sector. For the purposes of this discussion they are categorized as the *treatment agencies* and the *voluntary agencies*.

Treatment Agencies

The private sector treatment network is made up of privately incorporated agencies delivering health care services to alcohol abusers and alcoholics. Those incorporated as for-profit agencies follow the standard pattern for private enterprises. Those incorporated as nonprofit agencies must have a governing board of directors who do not benefit financially from the activities of the corporation. The majority of the nonprofit corporations are termed "community-based." That is, they serve a client population residing in the same locale as the facility, and have a working relationship with the community.

All of these agencies are subject to fiscal review by the Internal Revenue Service and State taxation authorities. Program changes are subject to review by the appropriate local health systems agency. All treatment services must be licensed by State authorities for specific programs. Depending on the nature of the treatment service, and the level of sophistication of the agency, it may also be operating under accreditation from the Joint Commission on Accreditation for Hospitals. Professional staff are licensed by the responsible body, and paraprofessional staff may be credentialed as well. Thus, while private programs operate outside the accountability process of governmental funding sources, their programs are monitored.

The structure of each agency depends on its function. A private sector treatment program could well be a part of a general hospital, and a part of that structure. Programs operated by the private sector parallel those of the public sector. They run the gamut from simple detoxification, through residential care, rehabilitation services, and outpatient programs. In essence, the staffing patterns and administration of private sector treatment do not differ appreciably from those in the public sector. In many instances, private sector programs are in generic health facilities with traditionally structured management and operations.

Private treatment programs were often looked at askance because their activities have been beyond the purview of public agencies, and because of their heavy reliance on private sector funding. In fact, the funding source issue is the major distinguishing factor for private programs, which rely on a fee-for-services structure. They may receive private philanthropic support, but the basis of their financial support is private, payment for services rendered. This comes either in direct payment from the client, or as third-party reimbursement from health insurance carriers.

It can be argued that private treatment programs have an accountability mechanism built in; clients pay for the services rendered in the private sector, and can choose to be served in another facility if they are not satisfied.

An example of private sector constituency development is the formation of the National Association of Alcoholism Treatment Programs (NAATP). This association includes the whole range of private sector efforts, from general hospitals that provide specialized treatment for alcoholism, to large proprietary care corporations with specialized facilities sited across the Nation, to small private hospitals serving one locale. NAATP is an advocacy effort for the private sector treatment constituency. Clearly, it developed in reaction to the prevailing emphasis on public sector activities. The organization will provide a focal point for united action by private treatment agencies on such issues as health planning and development of treatment standards and guidelines. It will be a mechanism for private treatment agency input to policymaking for the alcoholism field. The organization signals a recognition on the part of the private treatment sector that there is a process for change in the alcoholism field and that the only way to have an impact on that process is through united advocacy efforts. Voluntary Agencies

Perhaps the single most recognizable group in the private sector is the voluntary organization. Early on, concerned citizens joined together to take action against alcohol-related problems. In 1944, one volunteer, Marty Mann, proposed that a campaign of public education was needed to acquaint the public with the realities of alcoholism and rally support for programs to combat it. From modest beginnings as a committee of concerned individuals volunteering their time to this effort, the organization grew in the next three decades to a national movement, the National Council on Alcoholism. The key to this success rests with the method used to develop the organization: basic community organizing techniques linked to a uniform statement of purpose (Mann 1946). Local groups formed throughout the country; under the single statement of mission of the national office, each community developed an autonomous agency of citizen advocates who designed an action program to meet the unique needs of its locality, while working jointly on the overall goal of increased services for alcoholism.

In the years when there was little public recognition or acceptance of alcoholism as a major health problem, community volunteers often provided needed services, generally outside the mainstream of health care.

The efforts of these unpaid workers were initially directed toward helping those already seriously affected by alcoholism. Gradually, however, as they formed into community groups and councils on alcoholism, they also took an increasing role in advocating public acceptance and support for a broad range of education and treatment services.

The strength of the voluntary sector is related to the commitment of its volunteers, and to the grassroots nature of its program. There is a heightened sense of immediacy to problems that can be identified and remedied at the community level. There is a greater sense of involvement and fulfillment for volunteers in coping with issues that have demonstrable impact on their community. Building on this very

practical base facilitates involving individuals in the concepts of national policy and program issues.

The voluntary agencies, then, early on constituted the only identifiable national network in the alcoholism field. It was a loose structure, with a national office and local agencies whose connections were only a philosophical commitment to the same goals. However, there was a common link, the National Council on Alcoholism and a process of communication from the local to the national level.

There is no question that this voluntary network played a major role in the successful advocacy effort that resulted in the development of NIAAA and the governmental initiative for alcohol abuse and alcoholism. As was the case with the private treatment agencies, much of the volunteer sector was inundated by the flood of public dollars and programs that resulted from governmental action. In some instances, local voluntary groups became functioning and vital partners to governmental action. They took active roles in planning and policy development for alcoholism services as consumer advocates. However, in many cases, the voluntary agencies were adversely affected by the sudden increase in funds and philosophies in the alcoholism field. In this new phase, the voluntary sector was without a clear definition for its role with regard to the governmental sector. Volunteers had been the only advocates for alcoholism services, and in many cases the only providers of these services. The new wealth generated by government attention, and the influx of people to the field, appeared to negate the need for voluntary action.

The voluntary sector recovered more quickly from this changed emphasis than did the private treatment agencies. In some instances, recognized voluntary groups have participated actively in developing and managing innovative treatment programs. These groups are bridging the private/governmental gap in that they are part of the government initiative in program development but remain independent in their voluntary advocacy role.

A single agency example can trace the changing role voluntary agencies were offered. In 1960, as a result of the advocacy of recovering alcoholics, a voluntary agency was established to disseminate information about the disease of alcoholism and the positive aspects of treatment therefor. The agency was incorporated as a private nonprofit corporation, accountable to the community in which it would function. For 10 years, the agency functioned on a voluntary basis. Community support provided operating space, and fundraising covered basic costs. Staffing came from individuals who volunteered their time. By 1971, public attention to the problem of alcoholism was apparent. The anonymous citizenry and the public volunteers had combined to exert political pressure. In this instance, a voluntary agency, with a demonstrated record of community support, was the easily identifiable resource for program development. The Federal mandate for alcoholism programs had to be fulfilled. Established alcoholism agencies were readily available as resources. The voluntary

agency became the vehicle for public funding. The agency went from being an advocate for services to being a provider of services. However, the original mandate of the agency as an advocate remains. Paid staff may provide services; voluntary board members continue to act as citizen participants in alcoholism planning.

New and different kinds of volunteerism have surfaced in the field. Legal mandates to the health planning field require that consumers play a major role in the design and delivery of health care services. Voluntary agencies have traditionally advocated for services on behalf of their communities. While voluntary alcoholism agencies have as their primary mission the advocacy of services for the prevention and treatment of alcoholism, this role is changing and expanding to reflect the more sophisticated expectations of the community. At the beginning of the decade, the voluntary sector was preoccupied with winning public recognition and support for the treatment of alcoholism. This has been achieved; now it is incumbent upon the voluntary sector to refine its advocacy efforts to concentrate on the kinds and quality of services for alcohol abuse and alcoholism. Earlier advocacy efforts constituted an uphill battle against public apathy and ignorance. Today, the voluntary sector has the opportunity, and the responsibility, to bring the alcoholism field into full em. Public Law 93-641 mandates a comprehensive process for planning and delivering health services. This law requires a majority of consumers to make the determination of their health care. Voluntary alcoholism agencies have a history of serving as the advocates for the needs and demands the health planning process to serve as alcoholism advocates to the generic health care system.

There has been a major change in the nature of volunteerism as this sector adapted to increased governmental action in the field. From being small groups of individuals committed to their role as the only advocates for the alcoholic, many voluntary groups have expanded to the role of advocates for the whole community around a widely varied number of alcohol-related issues. While frequently functioning in partnership with government, many voluntary agencies have also found a valid role as citizen participants engaged in learning the bureaucratic impulse to control.

When discussing the voluntary sector in the decade of the 1980s it is helpful to expand the field to include consumerism and political activism. Voluntary agencies now have a valid legislatively mandated role as consumer advocates within the alcoholism field and as citizen representatives for the whole community with reference to governmental action.

Any discussion of the network of alcoholism services provided by the private sector has to depend largely on the visible constituencies. Until the last decade, there was a single visible constituency for alcoholism services—the voluntary agencies. Public recognition of alcoholism was slight, and services were scarce. Any individual or group interested in this problem became a member of the fields' increasing services to alcoholics.

Special Interest Constituencies

Just as public interest expanded the range of alcoholism services available, it increased the number of individuals and institutions with a vested interest in this field. What had been a simple network of volunteers and committed individuals has grown to a complex series of interrelationships. This is most clearly demonstrated by the increase in special interest constituencies and their interrelationships. Perhaps borrowing a concept from the original voluntary network of the National Council on Alcoholism, several identifiable and functional organizations are now advocating for services.

- Twenty-nine of the 50 States now have in place State-level organizations in the private sector whose primary function is to provide a mechanism for greater citizen participation in health planning for alcohol-related services.
- Community-based voluntary groups, while continuing in their initial mission of public education about alcohol abuse and alcoholism, have expanded their activities and become focal points for consumer activities.
- National, State, and local associations have developed to advocate for the needs of minorities. At this writing, the National Black Council on Alcoholism, the National Spanish Speaking Commission on Alcoholism, and the North American Indian Council are vital forces in this area.
- Alcoholism service providers have formed associations to improve and support their particular specialties.
- On the national level, at least three organizations are recognized as speaking for national grassroots constituencies: the American Council on Alcoholism, the Alcohol and Drug Problems Association of North America, and the National Council on Alcoholism.

Since 1967 when the Cooperative Commission on the Study of Alcoholism published its report and noted 2 agencies that advocated for the private sector, at least 30 more organizations have joined the discussion. In the tradition of private enterprise, these groups have formed spontaneously and automatically. Each reflects a perceived need on the part of individuals to develop an organized and politically powerful pressure group to have impact upon the governmental process.

These new constituencies bring a whole different set of networking relationships to the alcoholism field. In their formative stages, each new constituency sought support for its objectives from different groups, many of which are not traditionally associated with alcoholism. Thus, State-level voluntary agencies, in seeking support for health insurance coverage for alcoholism, might make common cause with their counterpart State mental health association, or with business interests in the community. The National Black Council on Alcoholism would seek support from the traditional black power structure within the community.

Each group, in building an effective constituency for its own programs, has formed linkages to other power blocks. This process has resulted in a much more broadly based constituency for alcoholism services. It has also resulted in a much more objective approach to the issues in that the network now includes many individuals and institutions with no vested interest in the field. These advocates are interested in the ultimate goal of combating alcohol problems. They do not have a stake in any institutionalized process for this goal attainment. As such they are probably more receptive to what is termed the "disaggregation theory" (Room 1978) than the more traditional groups. That is, they are cognizant of the fiscal and political realities of society. There is a finite amount of money and a finite number of people to be dedicated to alcohol problems. The resources in the field will never be sufficient to accomplish the tasks. If alcoholism services are to continue to grow, these services must not be viewed as a special interest area, but must become part of the generic health care system.

Trends

The current trend appears to be toward a wider network of relationships and resource sharing. It is generally recognized that the flood of public dollars into alcoholism services has eased. While these dollars were widely available, a tendency had developed in the field to rely on government for program development. The private sector became reactive rather than innovative. A change is clearly occurring: The rise of the new constituencies is a clear indication of recognition from the private sector of its rights, and responsibilities, in determining the future for alcoholism services. The development of groups like NCAAAP (National Coalition for Adequate Alcoholism Programs) signals a trend toward cooperative activities involving a wide network of disparate groups.

Government, too, is exhibiting a new recognition of private sector involvement in policy and program determination. On the national level, some tax credits are available for voluntary efforts on the part of citizens. Federal emphasis on the active role of consumers in health planning is a clear invitation to citizens to participate in determining the services they pay for. In some States, workmen's compensation and other fringe benefits are being proposed for volunteer activities in the public interest. Statements by public officials are being peppered with references to increasing private and voluntary involvement in social programs.

During the 1970s, references were made to the demise of the private sector and the sublimation of the individual to the good of the greater society. It would appear that that philosophy has come full cycle. Individuals, working in voluntary association, are being called upon to play a more active role in policy determination. The resulting private

sector network, which cannot be graphed out or described in precise statistical terms, is nevertheless alive and well and growing. Its strength and effectiveness are demonstrated by the numbers of individuals currently participating in efforts to combat alcohol-related problems.

However, it is not sufficient to continue making abstract statements based on anecdotal information gathered from the private sector. Processes must be developed that can readily identify private sector resources and bring them into a working partnership with the public sector. As was noted at the outset, a vast array of agencies and programs are working in the private sector to provide services regarding alcohol-related issues. However, they are working largely in isolation and may be fragmenting or duplicating efforts. Mechanisms for technology sharing and mutual assistance must be developed which will be flexible enough to enhance and encourage private initiative while providing a framework for systematic and cost-effective service delivery. The trends outlined above would suggest that both the public and the private sectors are coming to recognize that it is the role of government to develop that mechanism which can maximize the public/private partnership.

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Chapter 12

Redirecting Manpower for Alcoholism Treatment

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Abstract

As public funds for services decrease and demands continue, the efficient use of effective manpower will be a major means of insuring service availability during the eighties. Currently very little is known about the occupational groups composing the alcoholism work force.

Alcoholism work force problems stem from both the unique historical events and the current political and social factors which impact on all health and social service manpower. Until the sixties the primary care providers of alcoholism services had no formal clinical or medical training. While nondegreed counselors still make up the largest occupational group in the alcoholism work force, other groups are becoming important service providers.

Over the last two decades the work force has changed from one comprised primarily of nondegreed workers to one of both degreed and nondegreed personnel. The change is a byproduct of the evolution of a complicated network of alcoholism treatment programs. In contrast to previous decades, alcoholism services are provided in a variety of settings including hospitals, industrial workplaces, freestanding clinics, and community mental health centers. As a result, physicians, nurses, and social workers and other occupational groups have become active members of the alcoholism work force.

The transition in the composition of the work force has not been smooth. It has produced many questions about who should be doing what for the alcoholic client. The impact of other forces such as credentialing, the mainstreaming of human services, and third party payments has further hindered the development of an integrated work force.

The lack of information and research on alcoholism manpower presents a major barrier to the coordination of an efficient work force. For example, the functional differences between the occupational groups in the work force as well as differentials in their effectiveness and costs have not been examined. The success of the recent State Manpower Development Program implemented in 1979 by NIAAA to insure the fit between treatment needs and service provider skills will depend in a great part on the availability of more adequate information.

Introduction

In the last two decades various political, social, and economic factors have combined to produce a complex alcoholism treatment delivery system with a highly diversified work force. If coordinated, presumably the work force could meet treatment needs effectively and efficiently. However, to date there have been only sporadic and methodologically limited examinations of alcoholism manpower.

The goal of Federal alcoholism manpower activities during the 70's was to insure an adequate supply of trained workers. As a consequence, training and educational activities were emphasized at the Federal level. However, with the change in Federal policy, as represented by the State Manpower Development Program, initiated in 1979, the coordination of manpower resources has become a major concern among planners of alcohol services. The purpose of this paper is to delineate some of the issues that confront those responsible for developing the manpower system. The issues to be discussed are the current composition of the work force, interprofessional relationships, work force effectiveness, credentialing, relationships with other work forces, and a summary of the implications drawn from the analysis. Further, the discussion is limited to one component of alcohol manpower, the paid work force.

Current Composition of the Work Force

Information Sources

Federal initiatives led to the development of two data collection systems on alcoholism treatment: the National Alcoholism Program Information System (NAPIS) and the National Drug and Alcoholism Treatment Utilization Survey (NDATUS). NDATUS was administered to alcohol treatment settings for the first time in 1979 while NAPIS has been in place since 1972.

The two data sets are organized somewhat differently. NDATUS collects aggregated data on the disciplines of staff employed in each treatment program for the universe of public and private drug and alcohol treatment units. NAPIS gathers the same information from NIAAA-funded programs and, in addition, provides summaries on the utilization of staff time.

Two types of alcoholism treatment delivery systems are described by the NDATUS data. The first are programs that offer alcoholism services either as the only program or as a unique categorical service within an agency. These programs are referred to as "alcohol only" programs. The second type are those programs that offer both alcohol and drug services either as the major program focus or as a combined categorical service within an agency. The latter programs are referred to as "alcohol/drug" programs. While the definition of alcohol only and

combined alcohol/drug is somewhat problematic, it is the definition used by NIAAA for data collection purposes.

Staffing Patterns and Setting

Alcoholism treatment is provided in a variety of settings including hospitals, community mental health centers, halfway houses, and freestanding clinics. Various combinations of professionals and paraprofessionals, including psychiatrists, social workers, nurses, counselors with diverse levels of training, and other therapists staff alcoholism programs.

Table 1, based on NDATUS, illustrates that the majority of the work force consists of paid employees who work in settings providing only alcohol services, 65.3 percent. A sizable portion of the paid work force is employed in combined alcohol and drug service units, 30.2 percent. The remainder, 4.7 percent, consists of volunteers, of whom two-thirds work in alcohol only treatment settings.

Table 1. Number of Full-Time Equivalent (FTE) Paid and Volunteer Workers in Alcohol Only¹ and Alcohol/Drug² Treatment Settings

Treatment Setting	Number of FTE Workers	Percentage
Paid Workers		
Alcohol Only	31,196	65.3
Alcohol/Drug	14,344	30.0
Volunteers		
Alcohol Only	1,633	3.4
Alcohol/Drug	633	1.3
	Total	
	47,806	100.0

SOURCE: National Drug Abuse Treatment Utilization Survey (NDATUS) 1979

¹ N=2,821

² N=1,398

The relatively large percentage of alcohol workers who are employed in alcohol and drug settings indicates that services to the two populations are frequently combined. A continuation of the presently popular trend in multiservice programming will make it increasingly difficult to delineate alcohol and drug workers.

The data on the number of volunteers seriously underestimate the actual contribution made by volunteers. It is well known, for example, that volunteers constitute a parallel alcohol work force of considerable magnitude when workers such as 12th step Alcoholics Anonymous (AA)

volunteers are included. While AA is generally recognized as an ancillary service by most treatment programs, in many cases it is the primary therapy employed by treatment facilities. However, it is suspected that many programs did not adequately take the contribution of AA into account when reporting volunteer staff for NDATUS. Hence, the exact number of volunteers and the support they provide to alcoholism manpower remain to be assessed.

Table 2, also based on NDATUS, shows that the alcohol treatment work force is comprised of workers from diverse disciplines.¹ As shown, the three largest general categories of workers are administrative and support staff, counselors, and nurses.² Furthermore, nondegreed counselors comprise the largest single category of direct service workers in "alcohol only" programs, 17.4 percent, and the second largest group, 16.6 percent, in combined alcohol and drug programs. One can also observe that the degree of professionalism in the work force is not explained by the proportion of psychiatrists, other physicians, or Ph.D. psychologists. Several groups with specialized education contribute to the work force, and among these there is a higher clustering of nurses and social workers. It should also be noted the combined alcohol and drug programs employ more degreed workers than alcohol only programs.

Multiple Staffing Patterns

While tables 1 and 2 give some insight into the general composition of alcohol workers, the data mask important variations in the distribution of the work force. The data in table 3 show striking differences in the proportions of professionals employed in various treatment settings. For example, whereas halfway houses and freestanding clinics employ proportionally more nondegreed counselors than community mental health centers, the latter settings utilize more professionally trained social workers. As expected, hospital programs rely more on medical staff than do other programs.

¹For calendar year 1978, NAPIS data on 5149.6 full-time equivalent staff employed in NIAAA-funded treatment settings revealed the following: 0.6 psychiatrists; 0.5 other physicians; 3.7 registered nurses; 2.2 LPNs; 3.1 psychologists; 6.7 social workers; 36.6 alcoholism counselors; 1.1 vocational rehabilitation counselors; 0.3 occupational therapists; 10.3 other health cons. native practitioners; 5.6 data coordinators; and 29.0 administrative and other non-health staff.

²Although the high proportion of administrative and support staff negatively skew the proportions of reported direct treatment staff, they are included because they are an essential element of the work force that affects both program operations and costs.

Table 2. Number of Full-Time Equivalent Treatment Staff in Alcohol Only and Alcohol/Drug Settings

Staff	Alcohol Only ¹		Alcohol/Drug ²	
	Number of Subjects	Percentage	Number of Subjects	Percentage
Psychiatrist	441.1	1.4	234.4	1.6
Physician	487.0	1.6	180.3	1.2
Psychologist, Ph.D.	412.6	1.3	274.7	1.9
Psychologist, M.A.	497.6	1.6	453.6	3.2
Nurse Practitioner	122.9	0.4	55.2	0.4
Registered Nurse	358.3	1.1	106.5	0.7
Other Reg. Nurse	2,889.0	9.3	1,034.0	7.2
Licensed Practical Nurse	1,725.3	5.5	685.6	4.8
Social Worker, M.S.W.	1,208.1	3.9	894.4	6.2
Social Worker, B.A.	530.6	1.7	435.1	3.0
Other B.A. or Above	3,250.8	10.4	2,309.9	16.1
Counselor, Assoc. Arts	1,244.0	4.0	531.4	3.7
Counselor, Nongraded	5,436.7	17.4	2,006.0	18.0
Vocational Rehabilitation Specialist	920.4	3.0	452.4	3.2
Admin/Support Staff	10,906.1	35.0	4,309.2	30.0
Student/Trainee	765.7	2.4	381.4	2.5
Total	31,196.2	14,344.1		

SOURCE: National Drug Abuse Treatment Utilization Survey (NDATUS) 1979

¹ N = 2,821

² N = 1,398

The differences in staffing patterns reveal that the composition of the work force is a function of the type of treatment setting and whether alcohol only or alcohol and drug services are offered. Hence, there are several rather than one staffing pattern for alcoholism treatment.

The most prominent category of workers across all types of settings is that of administrative staff. These personnel make up from 20 to more than 48 percent of all staff in the various settings. Administrative staff apparently consume a large share of program revenues. However, the data must be interpreted with care because administrative staff may spend part of their time providing direct treatment services.

The current diversity in staffing patterns across treatment settings is in part a function of the historical forces which generated alcoholism services. While there appears to be no apparent unity to the work force in terms of professional orientation, the tradition of self-help has served as a unifying principle.

Interprofessional Relationships

Background

Historically both medical professionals and lay counselors have been involved with alcoholism treatment, but until recently most services have been delivered by nonmedical, nondegreed workers who rely on self-help techniques. Alcoholics Anonymous, which was organized in the 1930s, was instrumental in shaping the self-help quality of alcoholism treatment.³ Until the 1960s, AA was the primary provider of alcoholism services, albeit frequently complementing the work of the Salvation Army, churches, and other voluntary organizations. As alcoholism services developed and became institutionalized by local, State, and Federal agencies between the 1950s and the 1970s, the AA ideology infiltrated expanding alcoholism programs and resulted in paraprofessional dominance within the alcoholism treatment community.

At least two factors promoted paraprofessional success. First, AA had shown that untrained lay therapists could succeed where professionals failed (Anderson 1944). Second, professionals were not ordinarily interested in alcoholism treatment because it offered few financial or professional rewards. Consequently, as new programs for alcoholism treatment evolved, the most experienced group of workers who were interested in treating individuals with alcoholism were recovering alcoholics.

³Corwin and Cunningham's research (1944) reveals that, even in the forties, hospitals generally were reluctant to treat patients for alcoholism. After analyzing the results of a national survey on institutional treatment for alcoholism, they concluded that "(1) hospital facilities for care and treatment of alcoholics are scanty and inadequate, and (2) that those that do exist are not always used to the best advantage." [p. 80]

In the sixties, the period in which many social problems were redefined as medical problems, physicians and other professionals became increasingly interested in alcoholism treatment (Kurtz and Regier 1975). However, the continued dominance of lay counselors as the primary service providers was insured by several factors including: Albee's report (1959) on mental health manpower trends, which recommended utilizing paraprofessionals to compensate for mental health manpower shortages; the community mental health movement, which institutionalized and promoted the use of paraprofessionals in human services; and perhaps equally important, the fact that professionals had failed to develop treatment technologies for alcoholism that were accepted as meaningful alternatives to the paraprofessional approaches.

In the seventies, however, a new set of forces began to change the professional-paraprofessional balance. They included: increased participation of professionals in treatment, in part stimulated by an increase in Federal funds which provided support for the development of a complex network of treatment programs and training for alcoholism workers; a surplus of college-educated social science majors who saw the field as a potential for work and service; and the potential for third-party payments for alcohol services. As the number and types of workers increased, the status of self-help ideology and the role of nondegreed workers was challenged. Moreover, as the number of professionals willing to provide services multiplied, competition for jobs between occupational groups became a more important issue.

The ensuing conflict resulted in debates concerning the effectiveness of nondegreed versus professional therapists, and recovering alcoholic therapists versus other treatment staff. With the organization of the nondegreed therapists into counselor associations, the debate transformed into a controversy between alcoholism counselors and other professionals. The contest between professionals and alcoholism counselors has emphasized issues of territory and turf rather than substantive discussions of treatment approaches. This debate has been longstanding.

The issues in the contemporary professional-paraprofessional dispute were publicly outlined in the article entitled "Who Is Qualified to Treat the Alcoholic?", published in 1963 in the *Quarterly Journal of Studies on Alcohol*. The opposing views outlined by the authors, Krystal and Moore, heralded an old-new work force schism on the matter of who is qualified to provide treatment. Krystal's position was that only trained professionals are qualified to provide therapy for alcoholics. He argued that alcoholism is an emotional disease and "Thus, a person qualified to treat the underlying emotional problems of the alcoholic is one who is trained to diagnose all emotional and physical problems, one who is able to treat the patient psychotherapeutically." [p. 709] With respect to who is specifically qualified, he stated, "Of the disciplines now working with alcoholics only some psychiatrists, social workers, and psychologists seem to satisfy the criteria of adequate preparation

for treating the emotional problems at hand." [p. 710] Thus, Krystal rejected the longstanding tradition of lay therapy as a reasonable approach to alcoholism treatment.

Moore did not agree that individual psychotherapy was the most effective treatment for the majority of alcoholics. He maintained that intensive individual therapy was not warranted for approximately 80 to 85 percent of the alcoholic population. Using the findings of existing research, he concluded that other techniques requiring less extensive professional training are probably equally or even more effective for treating most alcoholics. He recommended that physicians, social workers, and other professionals who work with alcoholics should be provided with specialized training and should participate as supervisors and consultants to paraprofessionals in alcoholism clinics, rather than replace them.

The Krystal-Moore debate marked a turning point in interprofessional relationships in the alcoholism community. It forecast the division of the alcoholism work force into professional-paraprofessional constituencies. The printed rejoinders to the publication indicated that not only were professionals interested in alcoholism but that they were prepared to take a more important role in its treatment (Agrin et al. 1964; Lemere et al. 1964; Williams et al. 1965). With few exceptions the comments supported Moore's position recommending the use of a combination of paraprofessionals in alcoholism treatment. While the Krystal-Moore debate demonstrated the potential for conflict, the lack of heavy professional involvement in alcoholism treatment at the time precluded immediate interprofessional quarrels.

However, from the late 1960s through the 1970s the old work force of counselors and the new work force of other professionals debated these issues. The interprofessional differences are particularly in evidence at the organizational leadership level. Counselors maintain that they are the most effective alcoholism workers, that professionals frequently perform the same functions for more pay, and that the professionalization of services is actually threatening the potential success of alcoholism services. In contrast, professionals contend that alcoholism counselors are narrow-minded, lack essential analytic skills, and that their dominance has fettered innovation in treatment (Kalb and Propper 1976; Tournier 1979). To date, both sides have based their position on assertions rather than evidence, and no definitive attempt has been made to delineate the issues affecting the utilization of alcoholism manpower.

Functional Ambiguity

Prior to the entry of professionals into the alcohol work force during the 1970s, roles within the work force were distinct. In as much as only scattered groups of medical professionals provided specific medical or psychiatric services to alcoholics in hospital settings, their roles were rather narrowly circumscribed. In contrast, alcoholism counselors,

employed in halfway houses and other freestanding alcoholism programs, provided the great majority of alcoholism services. In addition to being primary therapists, they occupied the gamut of administrative and support roles that characterize treatment settings. They also functioned as advocates and outreach workers.

The recent influx of social workers, psychologists, and other professionals has diminished the status of the alcoholism counselor because the new work force has assumed a supervisory role over the old alcohol work force. In addition, the allocation of roles has been reshaped so that counselors no longer dominate the service staff of alcoholism treatment settings. A major issue from the viewpoint of the alcoholism counselors is that the functional difference between them and professionals is unclear because both perform many of the same functions in the treatment process.

Such functional overlap is perhaps unavoidable. With respect to mental health professionals, McPheeters and colleagues (1979) noted that

Each profession depends on much the same knowledge of human growth and development and psychological and sociological theories and principles. Each profession uses the same skills of interviewing, counseling, modifying family dynamics, working through group processes, etc. These common areas of knowledge and skills make up a large percentage of the activity of the profession. (pp. 38-39)

Research by Steinberg and colleagues (1976) substantiated such overlap. They analyzed the functions of 812 workers in community mental health centers and found that psychologists, social workers, and paraprofessionals performed the same range of treatment functions.

Attempts have been made to define the unique functions of staff in mental health settings. For example, McPheeters et al. developed a framework for interpreting interprofessional relationships, career systems, and level of workers in mental health and retardation settings. They depicted the work force as consisting of four core professional groups—psychiatrists, psychologists, social workers, and psychiatric nurses—and various paraprofessionals. The latter represent a broad category of mental health workers. The work force is further distinguishable in terms of the level of work, including entry level, technical level, associate professional level, and professional level. While there are considerable similarities between the mental health and alcoholism work forces, and, in many cases, their positions overlap in community mental health centers, no one has examined whether this schema applies to the total alcoholism work force.

In fact, the similarities and differences in the functions of alcoholism workers themselves have not been systematically evaluated. Available information is descriptive and anecdotal rather than analytic. While it is apparent that some functions, such as medical services, require specialized training and skills, the need for professional expertise for the vast majority of functions is less obvious. Differences that have

been established may be more a result of educational training than actual functional capabilities or skills. For example, nurses, psychologists, and social workers support their treatment activities with the theories of their disciplines. In addition, they describe their roles with concepts and vocabulary that are consonant with the conceptual frameworks and practice of their disciplines. The theoretical models or unique vocabularies of professionals, however, frequently do not result in differences in treatment functions and, in the routine of practice, the activities of professional and nondegreed counselors are often identical.

Role diffusion and lack of clear functional distinctions complicate relationships between members of the work force. Yet some overlap is desirable because it makes it possible for staff to cover for each other (Kole and Mitnick 1978). The fact that individuals who perform similar functions are reimbursed at different rates causes additional difficulties. The future effectiveness and efficiency of manpower in alcoholism will depend on the clarification of these conflicts.

The Functions of Alcoholism Counselors

The functional overlap of alcoholism counselors and other professionals is further complicated by changes in the roles of the counselors themselves. In the 1940s and 1950s they were lay therapists who ordinarily were also recovering alcoholics. During the sixties, they were redefined as paraprofessionals who, while they had no formal clinical training, had experiential expertise that uniquely qualified them to serve the needs of alcoholics. In the midseventies alcoholism counselors were redefined as the "new professionals" who by virtue of their life and work experience, and increased formal training, were accorded professional status.

Although the rapid evolution of roles makes it difficult to define a typical alcoholism counselor, four factors—history, education, occupational identification, and work function—distinguish the alcoholism counselor from other occupational groups involved in providing alcoholism services. The four factors constitute an occupational culture and the counselors' collective history provides a basis for an occupational identity. Counselors have passed on the conventions of the trade from one generation of workers to the next and have maintained the ideologies and practices associated with their role in spite of changes in the characteristics of counselors and the settings in which they work. Today, for example, counselors are likely to include persons with college degrees. These degrees, however, are not likely to be in mental or general health disciplines, but rather in social sciences, humanities, or natural sciences. In comparison with other alcoholism workers, the most distinguishing feature of alcoholism counselors is that their primary source of identity is their occupational role rather than a formal discipline. In contrast to other alcoholism workers, counselors are uniquely organized around helping alcoholics.

Although historically counselors have been the primary care providers in alcoholism, very little analytic attention has been given to the actual functions performed by these workers. The Roy Littlejohn report, "Competencies of an Alcoholism Counselor" (1974), intended to develop criteria for credentialing by delineating the functions performed by counselors. The functions, along with the draft criteria, were circulated to 2,000 institutions employing alcoholism counselors. The final report specifies 22 tasks performed by alcoholism counselors, including:

"(1) intake; (2) assist in developing treatment plans; (3) facilitate transportation and other logistics of treatment as needed to maintain professional credibility with clients; (4) individual and group counseling; (5) continuous client evaluation; (6) referral; (7) crisis intervention; (8) casefinding; (9) client followup contact; (10) client orientation and motivation; (11) work with families and significant others; (12) seek and use collateral support (employer, friends, etc.); (13) reporting and record keeping; (14) coordination of the treatment plan; (15) outreach; (16) case consultation; (17) identification of treatment gaps and overlaps; (18) assist in program development; (19) identify, mobilize, and coordinate community resources; (20) education and prevention; (21) train other staff; (22) program consultation." [p. 16]

A more recent survey of national credentialing requirements for substance abuse workers reveals that these tasks still comprise the functions of alcoholism counselors (Camp 1979). However, the extent to which a counselor performs the full range of tasks depends on the type of treatment setting and the composition of the staff. For example, in hospital programs a nurse or social worker is likely to conduct the intake interview but in a halfway house the task would be performed by an alcoholism counselor.

Others have provided descriptions of the alcoholism counselor that are compatible with the Littlejohn report (Staub and Kent 1973; Valle 1979). In general, the alcoholism counselor is depicted as a frontline worker and a primary care provider who is responsible for coordinating a wide range of services supporting the treatment process. McPheeters et al. (1979) note that the alcoholism counselor's functions are similar to those of case managers in mental health settings.

A major issue regarding alcoholism counselors relates to the use of the term "paraprofessional" to describe their position. Although Staub and Kent (1973) titled their volume on alcoholism counselors *The Paraprofessional in the Treatment of Alcoholism*, they explicitly made no attempt to define the term paraprofessional. The meaning of the term is ambiguous but at least two common usages can be identified. In some contexts the term is used to indicate that the employee is an aide to a professional, while in others it is applied to persons who perform professional tasks and have professional skills but lack an academic degree.

The negative connotation of "para" as an assistant has led to a rejection of the term paraprofessional by most alcoholism counselors. Their sentiment is that they should be recognized as independent professionals. The strong feelings underlying the struggle for a title that is both appropriate to the functions of alcoholism counselors and satisfies their sense of where they belong in the hierarchy of the work force will likely be felt in the effort to develop a coordinated manpower system.

The Functions of Other Professional Alcoholism Workers

Although alcoholism counselors constitute the traditional frontline workers in treating alcoholics, other professional groups are increasingly important, including physicians, psychiatrists, psychologists, and social workers. The functions of these workers are determined in part by the objectives of the employing organization and in part by the match between the tasks to be accomplished and the available staff in a given treatment setting. A major handicap in developing a coherent plan for an alcoholism manpower system is the lack of specific information regarding the functions performed by various categories of workers. Since a comprehensive job analysis across institutional settings has not been undertaken, there is no way of determining the amount of variation in worker functions among institutional settings, nor the impact of different types of treatment teams. The ADAMHA task force report (Kole 1978a, b), while not complete, is helpful in clarifying functions by discipline.

The functions of these workers generally represent the role definitions they have in the medical hierarchy, but the extent to which traditional role definitions are adhered to is a function of the institutional norms. Physicians, psychiatrists, and psychologists represent a triumvirate which potentially could wield considerable control over alcoholism workers. Ordinarily they occupy the role of program director, clinical director, or supervisory consultant. In many instances State licensing laws require that programs be under the direction of medical professionals and stipulate that only medical personnel perform certain treatment functions. In practice, physicians and psychiatrists are often only perfunctory heads and actual day-to-day operations are left in the hands of lower level staff.

Psychiatrists are most frequently employed in alcoholism units at veterans and psychiatric hospitals. Frequently they assume major responsibility for the diagnostic process, the development of treatment plans, and the supervision of clinical staff. In contrast, physicians are most likely to be employed in hospital programs where they direct the medical services rendered to the alcoholic. In comparison to those of physicians and psychiatrists, the work and employment pattern of psychologists is more diffuse. In addition to performing consultations around diagnostic issues and treatment planning, psychologists fre-

quently assume a limited caseload, provide staff training, and engage in research (Kole and Mitnick 1978).

Within the alcoholism treatment setting MSW (Master of Social Work) social workers usually are either case managers or therapists. In the former role, they coordinate clients' service needs from intake to followup. In the latter, they generally apply treatment techniques acquired in academic training. Social workers, however, are increasingly assuming administrative and supervisory responsibilities in alcoholism treatment. Currently, MSWs comprise the largest professional group among directors of community mental health centers (Kole and Mitnick 1978).

Social workers' roles are likely to vary according to the type of setting. Most frequently they are employed in community mental health centers, occupational alcoholism programs, and hospitals. In community mental health centers, a psychiatrist or psychologist is likely to be the clinical director, whereas the social worker functions as a clinical supervisor. In occupational alcoholism programs and hospital-based programs, the physician is the program director, and the MSW the clinical supervisor. In contrast, in halfway houses and freestanding clinics, the social worker is frequently the program director and/or clinical supervisor, supported by a psychiatrist who serves as a clinical consultant.

In comparison with the administrative and supervisory role played by physicians, psychiatrists, psychologists, and social workers, the role of nurses is generally one of direct service. Although nurses are most likely to work in hospitals, they are also represented on the staffs of halfway houses and freestanding clinics. In the latter, nurses are likely to function as medical consultants to staff and clients, provide health education and supportive counseling, and perform routine nursing management tasks. Until recently their roles in hospital settings were more traditional, consisting of managing the medical regimen prescribed by the physician. Increasingly, however, nurses work as part of an interdisciplinary team in which they coordinate and implement the various services provided to alcoholic clients.

As more alcoholism services become incorporated into general health services, nurses and other health professionals will probably assume an even larger role in the treatment process. As services move from nonmedical settings to traditional medical institutions, alcoholism counselors are likely to find themselves at a disadvantage in terms of competing for available positions. Physicians' assistants and family nurse practitioners, for example, may become more involved with alcoholism treatment. Currently, these workers, like several other occupational groups such as occupational therapists and aftercare and outreach workers, represent only a small proportion of the alcoholism work force.

Administrators and administrative support staff make up the remaining workers in alcoholism treatment. According to NDATUS' statistics,

this broad category of workers comprises the largest proportion of the alcoholism manpower pool.*⁴ The numerical size of the group reflects the rather extensive bureaucratization of treatment services. Beyond the fact that it represents the greatest number of workers, there is virtually no information about the role of these workers. Thus, it is not known how many are program directors, secretaries, custodians, bookkeepers, or researchers and how many provide some direct treatment services.

Nor is it clear how these workers are recruited, the types of credentials they possess, or the career tracks they represent. However, because they represent such a large portion of the work force, they are important to the deliberations on a manpower system. Effective planning is likely to take place only to the extent that information is available on these workers.

Work Force Effectiveness

The increasing competition between alcoholism counselors and other professionals in alcoholism treatment has raised questions over who are the most effective service providers. The variation in the education and training of the occupational groups complicate an analysis of differential effectiveness. Not only are there differences in the type of professional education but also in the amount of specialized alcoholism training. Physicians, nurses, social workers, counselors, and others are increasingly receiving alcoholism training; however, as of yet, a comprehensive examination of such training has not been undertaken.

Available research on the effectiveness of different types of treatment agents perhaps raises more questions than it answers. Moreover, the existing studies tend to be based on small samples, address different issues, and hence fail to add up to a comprehensive body of information. For example, in the past 15 years, the following alcoholism issues relevant to manpower have received some consideration: (1) the treatment of alcoholism by physicians in private practice (Jones and Helrich 1972); (2) the attitudes of professionals toward alcoholics (Gray et al. 1969; Sowa and Cutter 1974); (3) the merits of an interdisciplinary approach in alcoholism treatment (Fox 1967; Ottenberg 1969); (4) the use of volunteers in treatment (Covner 1969; Manohar 1973); (5) the impact of training on the treatment work force (Kilty and Feld 1979; Rosenberg et al. 1976); (6) the relative effectiveness of recovered alcoholics in treatment (Argeriou and Manohar 1978; Blume 1977); and (7) the impact of different staff/client ratios on client outcomes (Stinson et al. 1979). While the studies provide important information, they fail to

*1978 NAPIS data revealed that administrative and other nonmedical staff represented the second largest occupational group employed in NIAAA-funded treatment programs. Among the 5149.6 full-time equivalent staff, 29 percent were in the administrative/other non-health staff category.

provide conclusive data on the differential effectiveness of the various service providers.

Research in fields related to alcohol treatment provides some evidence that professional training is not a corollary of effectiveness. Fisher (1978) and Hogan (1979) provide a useful summary of the data on effectiveness. In a review of research in five areas of professional practice including social work, psychotherapy and counseling, corrections, psychiatric hospitalization, and education, Fisher concluded that professionals are no more effective in bringing about positive change than nonprofessionals. Hogan, in an extensive review of the practice and regulation of psychotherapy, builds a convincing argument that academic training does not result in more positive therapeutic outcomes. He concludes: "Empirical evidence indicates that those in the helping profession bring about similar results, no matter what the purpose of the method is and irrespective of the type of academic training." (pp. 343-344)

Recent research suggests that the same relationships hold in alcoholism treatment. Emrick (1974, 1975), in a review of 384 studies of psychologically oriented alcoholism treatments, concluded that the method of treatment had no discernible effect on outcomes, and that alcoholics who received no treatment seemed to do as well in maintaining abstinence as those who were treated. It must be noted, however, that those who received some form of treatment fared better in terms of reducing their drinking problem than those who received no treatment.

An analysis of a 2-year national followup sample of NIAAA data undertaken by Armor and associates (1978) demonstrated the uniform effect of different types of treatment. In brief, the findings indicated no noteworthy differences in outcome when controlling for a number of factors, including the level of professionalization among staff.

While existing research suggests that there is no clear relationship between effectiveness and the level of education and professionalism, another body of research indicates that paraprofessionals are effective service providers. These data should not be interpreted to mean that paraprofessionals are more effective than professionals. Because the criteria used to evaluate the effectiveness of paraprofessionally trained workers have differed from those applied to professionals, comparisons are difficult. Research on professionals has generally focused on their skills in recruiting hard-to-reach clients and increasing service availability. The research does show that paraprofessionals are at least as effective as professionals on these dimensions, and that certain clients actually remain in treatment longer when treated by paraprofessionals (Gartner 1971; Grosser and Kelley 1969; Reissman and Popper 1968; Sobey 1970).

It seems reasonable that not all populations will be served equally well by the same type of provider. Pattison (1973) maintains that multiple treatment approaches are essential for an effective alcoholism treatment network. His thesis is that different subpopulations of

alcoholics do well with different treatment modalities. In other research, Pattison et al. (1969) conclude that the effectiveness of treatment would be increased if the expectations of clients are matched with the goals of the treatment setting.

Stinson et al. (1979) studied the impact of staff/client ratios on treatment effectiveness in the treatment outcomes of 466 clients who were randomly assigned to one of two inpatient programs at the Singer Mental Health Center, Rockville, Illinois. Although the educational composition of the staffs was similar, one program had a high staff/client ratio and the other had a low ratio. The findings revealed that clients treated in the low staff/client ratio program showed significantly greater improvement in controlling their drinking behavior than those who benefited from more staff attention. These findings supported the work of Stein et al. (1975) and Edwards et al. (1977), who also demonstrated that less intensive treatment approaches are as effective as more intensive programs. These findings have major implications for manpower planning, particularly with respect to implementing more efficient programs.

Additional research has shown that indicators other than educational achievements should be used in examining differentials in the effectiveness of service providers. Interpersonal skills, for example, are valid indicators of counseling effectiveness. Moreover, such attributes as genuineness, warmth, and empathy are highly associated with treatment effectiveness (Carkhuff 1969). Furthermore, it has been shown that these attributes can be acquired through training (Berenson et al. 1966; Carkhuff and Truax 1965).

While the existing research leaves much to be desired in terms of providing a base for broad generalizations, the findings raise serious questions about the correspondence between level of formal education and skills in serving the needs of persons in trouble with alcohol. Therefore the possibility that limited treatment resources can be extended without serious sacrifices in effectiveness by using less intensively trained workers also deserves careful consideration.

Credentialing for Alcoholism Counselors

Efforts to develop credentialing systems, particularly certification systems, for alcoholism counselors have been under way for several years. The commitment of funds by NIAAA to credentialing evidences the Federal commitment to the concept. The purpose of credentialing systems is to specify criteria that must be met in order to practice counseling. Other purposes of credentialing include enhancing the counselor's status, legitimizing counselor services as deserving of third-party payments, insuring quality of care, establishing the occupation as a profession, increasing the potential for job mobility, and supplying the profession with a means of accountability.

Up to the present State certification systems have been developed either by interested State counselor associations or State agencies. A survey of alcoholism credentialing systems undertaken by two members of an ad hoc alcoholism credentialing reciprocity committee in November 1979 revealed that 23 States had mechanisms for credentialing counselors. However, not all States responded to the survey, and based on other sources of information it is likely that 37 States are presently certifying counselors. Moreover, 9 additional States are reportedly in the process of developing credentialing structures (J. Gomial and M. Taylor, personal communication with the authors, 1980).

The fact that States have independently developed criteria for credentialing could make reciprocity agreements difficult. However, because many States used the Littlejohn report as a guide for developing credentialing systems, there are likely to be many similarities among the systems that have been developed.

The eligibility requirements specified in the Littlejohn report included: a minimum of 1 year's experience as an alcohol counselor (some amount of training could be substituted for experience), a portfolio which includes evidence of experience and training, and satisfactory completion of a national certification examination. In addition, six areas of job competencies were defined, including (1) communication; (2) knowledge of alcohol use, prevention of alcoholism, treatment, and rehabilitation; (3) evaluation and assessment; (4) planning; (5) information and referral; and (6) counseling and treatment.

Although a comprehensive examination of alcoholism credentialing systems has not been undertaken, a national survey of drug counselor credentialing systems conducted in 1979 revealed that drug and alcohol credentialing systems were similar (Camp 1979). In fact, 12 States provide a single credential for both alcohol and drug workers. The survey also delineated the structural characteristics of substance abuse credentialing systems. Some are based on registration systems, others are merit or civil service systems, and while some are voluntary, others are mandatory. However, the majority of credentialing systems are voluntary certification systems.

Other structural differences include variation in the enabling legislation, credentialing fees, type of credentialing authority, grandfather clauses, and recertification requirements. Several of the credentialing models also distinguish between entry, intermediate, and advanced counselor positions based on the amount of work experience, training, and education.

Camp found that the qualifying requirements for a drug/substance abuse credential include: a specified amount of work experience, formal education, and training; completion of a work practicum; evidence of particular skills and knowledge; and substance abstinence. Overall, the primary differences between credentialing systems are the number of requirements and how precisely the means for fulfilling the criteria are specified. The findings also indicate that three criteria—skills, knowl-

edge, and work experience—constitute a core of requirements that are included in nearly every credentialing model studied.

The credentialing process raises several significant issues which require further consideration. For instance, it would seem essential that credentialing criteria neither exclude the group they are intended to protect, the nondegreed counselors, nor prevent others from entering the counseling work force. In addition, it is important to examine the extent to which competency is the basis for credentialing (Pottinger and Goldsmith 1979). At this point the criteria for credentialing substance abuse counselors represent minimum eligibility requirements for employment. Hopefully the process will continue to develop into a system that raises standards above the minimum level. Inasmuch as the impact of credentialing has not been assessed it is not known what effect, if any, credentialing has on such critical factors as competence, effectiveness, third-party payments, or the career mobility of counselors.

Relationship with Other Work Forces

Mainstreaming

The previous discussion indicates considerable functional overlap and ambiguity within the alcoholism work force. A further factor affecting the work force is a trend toward the use of generic workers who serve a wide range of human service needs. In addition, since alcoholism is increasingly viewed as a health problem, more alcoholism services are being delivered by health and mental health workers in the traditional health and mental health settings. This "mainstreaming" of categorical services into traditional delivery systems will have a major impact on the future composition of the alcoholism work force.

Human Service Work Force

The overlap in the alcohol and drug credentialing systems reflects the inherent similarity among the diverse human service programs. Human service programs share the same overall goal of helping people in situations of crisis, disability, and unmet need. They differ primarily in terms of the aspects of peoples' lives they address and in the location of services established by historical precedent (McPheeters et al. 1979). The Community Mental Health Centers Act of 1968 (Public Law 90-574) and its amendment in 1970 (Public Law 91-211) created structural ties between alcohol, drug, and mental health services and, as a result, such services are offered not only in the same setting but frequently by the same personnel.

The fact that the same worker may provide alcohol, drug, and mental health services blurs the parameters of the alcohol work force and makes projections of alcoholism manpower needs problematic. Some would even hypothesize that the overlap of personnel heralds the end

of separate alcohol, drug, and mental health work forces. While it is beyond the scope of this paper to deal with that issue, the need for coordinating manpower activities of the Federal Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) is obvious. If for no other reason, the expense of undertaking separate studies of manpower and initiating distinct programs for manpower development should encourage the three agencies involved to cooperate in these matters.

Several drug and mental health manpower projects have provided insights for those concerned with alcoholism manpower. They include two projects funded by the National Institute on Drug Abuse (NIDA): (1) a job analysis of the functions performed by drug counselors, and (2) an analysis of the skills, tasks, and abilities involved in counseling drug abusers.⁵ The Mental Health Worker Certification Project of the National Institute of Mental Health (NIMH) is another activity which is of particular relevance to alcoholism workers.⁶ Although the initial effects of the latter project are focused on the mental health worker, the long-range goal is to develop a generic human service worker credential. Representatives from the alcohol and drug field serve as members of the committee developing this credentialing system.

While efforts to implement credentialing underscore the need for better indicators of competency, it is also essential that credentialing systems consider the professional growth and mobility of workers. The current credentialing mechanisms do not promote worker mobility across human service fields. Yet, reportedly, human service workers in the various fields perform many of the same tasks and rely on similar skills in doing their work.

Huff's research (in press) of job competency is the most recent evidence of the comparability of essential competencies among human service workers. Huff's sample included 502 human service workers employed in mental health, criminal justice, alcohol, drug, and other service settings. The workers represented a range of occupational groups from paraprofessional to professional who were employed in 24 different agencies. Individuals rated 120 items of job competency according to whether (1) the item was relevant to their role, (2) harm was likely to occur to clients if the attribute was missing, and (3) the attribute was characteristic of average or superior performance. The analysis revealed that the human service workers agreed on the essential components of competency, which supports the contention that human service workers rely on similar skills.

Health Work Force

Alcoholism is viewed not only as a social problem but also as a medical problem. As alcoholism services increasingly are provided in

⁵The job analysis was conducted by the University Research Corporation, Washington, D.C., and the skills matrix project was conducted by the Medical College of Pennsylvania.

⁶This project is being conducted by Southern Regional Education Board in Atlanta, Georgia, and the National Center for the Study of Professions, Washington, D.C.

medical settings, more health workers become members of the alcoholism work force. Moreover, policies related to general health care now affect what takes place in alcohol services. For example, alcoholism services currently are assumed to fall under the mandates of the Health Planning and Resource Development Act (Public Law 93-641).

Although insurance carriers have extended coverage to alcoholism only within the last 10 years, in the next decade such coverage could have a dramatic effect on alcoholism manpower. Federal demonstration projects that examined the feasibility of providing such coverage have been instrumental in initiating its growth. Eight of 12 studies analyzing the benefits of alcoholism coverage found that treatment for alcoholism is followed by a reduction in general medical care utilization (Jones and Vischi 1979). Those concerned with maintaining health care costs see the treatment of alcoholism as a major element in cost containment.

The implication of these findings is that alcoholism insurance benefits may serve as a means for cost containment in health care because of their preventive effect. Currently, many States have drafted legislation requiring insurance carriers to extend their coverage to alcoholism. Unless the effectiveness of nonmedical service providers is demonstrated, insurance carriers are likely to favor coverage for treatment provided by medical and other highly trained professionals.

In addition, the current problem of excess hospital beds makes the alcoholic client more attractive than in the past, increasing the likelihood of competition with nonmedical treatment alternatives. The fact that eligibility requirements favor medical care settings and treatment staff warrants further study. The trend may not only offset the anticipated savings in health care but may also have a substantial impact on the composition of the alcohol work force.

Implications for the Development of Alcoholism Manpower

The composition of the work force has undergone considerable change over the last two decades. It has changed from one primarily comprised of nondegreed workers to one of both degreed and nondegreed personnel. During this period Federal policy was initially focused on the problem of providing a more adequate supply of skilled workers. Training was considered the most expedient means for increasing the supply of counselors and providing existing lay counselors with more formal education opportunities. Much of the training was short-term, focused on the development of skills and relatively free from specific disciplinary perspectives.

While the availability of training opportunities solved the immediate problem of supply, other problems developed in its place. In the last decade the work force has diversified considerably (Pattison 1977), and

as a result questions about who should do what for alcoholics have increased. Moreover, the impact of such forces as professionalization, credentialing, mainstreaming of services, and third-party payments have further complicated the development of an integrated work force.

Until recently there was no Federal policy or program for developing a coherent manpower system. NIAAA's State Manpower Development Program (SMDP) was initiated in 1979 to coordinate treatment needs with provider skills. The task facing the SMDP is that of directing the present set of manpower activities into an integrated manpower system which can respond to alcoholism needs with reasonable efficiency and effectiveness. This paper has delineated a number of issues that must be dealt with in that process, including:

1. Explication of roles and functions. A basic requirement for establishing a well-integrated work force is a clear understanding of the roles and functions of the present work force. In part, this issue is addressed by the mandate of the SMDP. However, it will be important not only to have a descriptive profile available of who does what in each State, but to integrate those descriptions to provide an overall view of the national manpower pool for alcoholism services.
2. Service provider characteristics. An additional issue of importance is the composition of the work force in terms of service provider characteristics. An effective provider system must have a social profile with respect to such characteristics as age, sex, and ethnicity that is congruent with the treatment population. While these issues have been acknowledged as important, little information is available on the profile of alcohol workers. Thus, effort must be extended to assess the characteristics of provider groups.
3. Staffing patterns. Since the alcoholism worker is only one element of the treatment staff, the impact of staffing patterns on the contribution of the individual workers also needs to be examined. For example, the relationship between different staffing patterns and worker productivity and effectiveness must be delineated. In doing so, the contributions of the volunteer work force need to be considered. The geographic location of the work force should also be studied in order to assess problems of maldistribution. Existing research on the utilization of health care workers should be useful in developing a framework for such inquiry (Rafferty 1974; Reinhardt 1975).
4. Discipline melding. As the need for workers in alcoholism has expanded, counselors and professionals from various social service arenas have been attracted to the field. The effect of melding alcohol and nonalcohol professionals in alcoholism treatment settings remains unexplored.
5. Mainstreaming. As alcoholism services become incorporated into traditional medical and mental health settings, the composition of the work force will undoubtedly undergo further change.

The effect would be diminution of the traditional alcoholism service providers who heretofore have represented the greatest number of alcoholism workers.

6. Setting-focused vs. skill-focused. Up until now the primary determinant of the characteristics of workers has been the setting. Although the treatment functions performed may be comparable, different settings recruit individuals from different disciplines. Thus the same service may be provided by a social worker, nurse, or nondegreed counselor at very different cost levels, but with no discernible difference in treatment outcomes. The match of manpower skills and treatment functions across organizational settings could have a significant impact on efficiency and effectiveness.
7. Professionals vs. nonprofessionals. A common perception in the alcoholism field is that substantial conflict exists between degreed professionals and nondegreed professionals. The conflict may be not so much a function of competition between physicians, psychiatrists, and nondegreed counselors, but more related to the influx of middle-range workers in medical contexts such as nurses, social workers, and other therapists. The issues generated by these conflicts require attention.
8. Training. A comprehensive examination of alcoholism training should be undertaken. Such research should define the training needs of various work groups, evaluate the effectiveness of various training models, and assess the differential impact of training on work force constituencies.
9. Career patterns. Another unresolved issue relates to the career patterns of the alcoholism work force. The ad hoc development of treatment programs in various settings under different auspices and with dissimilar organizational linkages has led to an irregular pattern of recruitment for program administration and staff. In order to maintain a manpower system, it is particularly important that recruitment, staff turnover, and the burnout factor be studied.

Conclusions

Until recently the alcoholism work force has been isolated and has received very little attention. Although the alcoholism field will benefit from manpower activities in related human services, research focusing specifically on alcoholism manpower needs to be undertaken.

Alcoholism programs were implemented in a period in which the emphasis was on expansion rather than reduction in human service programs. The historical development of alcoholism programs, moreover, had a major impact on relationships among members of the alcoholism work force. In contrast to other human service programs,

nondegreed workers have been the traditional service providers. As alcoholism treatment programs became institutionalized, more professional workers began entering the work force. This resulted in interprofessional conflict which has never been adequately resolved.

In addition, a fragmented conceptual view of alcoholism has compounded the problems faced by the alcoholism work force. Each view of alcoholism employs different treatment technologies and types of personnel. In order to create a more efficient treatment network, further integration of the alcoholism work force is essential.

Such efforts should be directed toward developing a more complementary work force. It is time to direct the focus of alcoholism manpower activities to that end. In doing so, two questions must be answered. First, what are the needs for treatment services? Second, how may these needs best be met through the use of human resources?

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